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Drug & Cosmetic INDUSTRY

VOLUME 52

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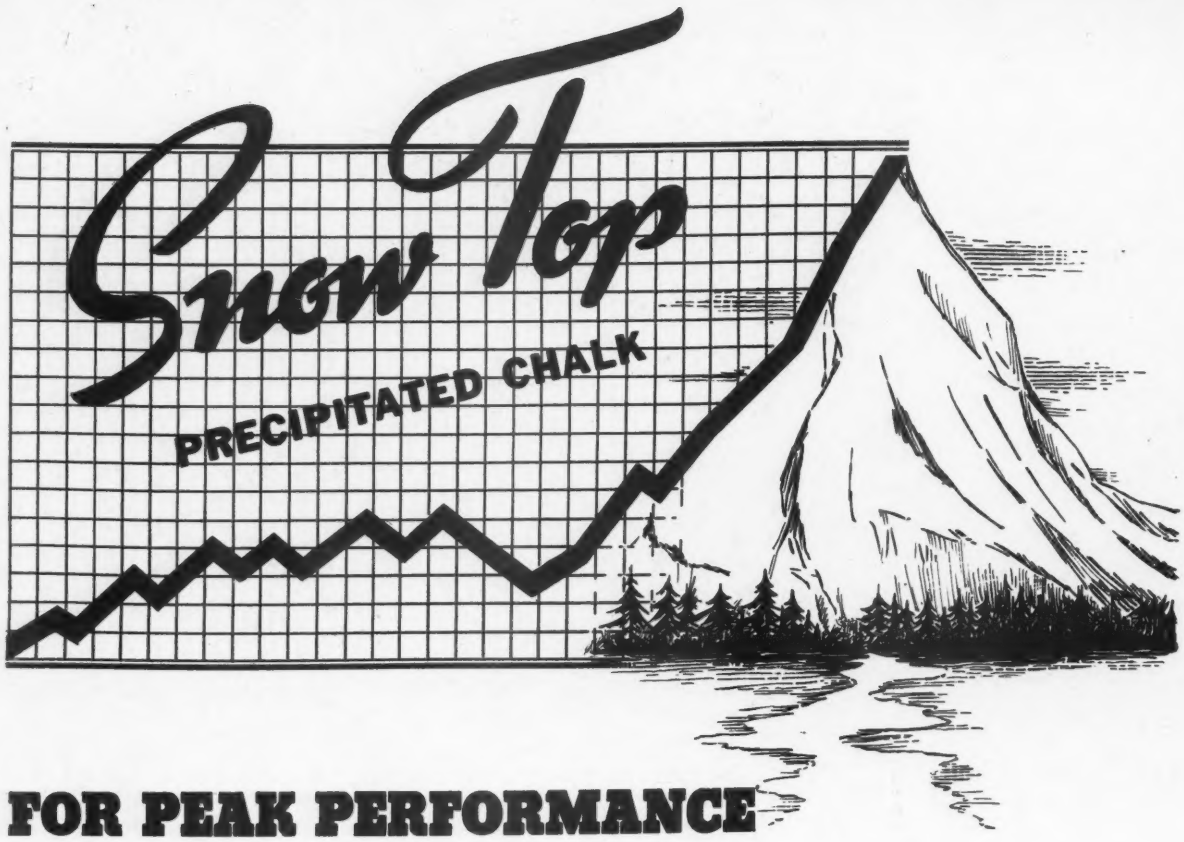

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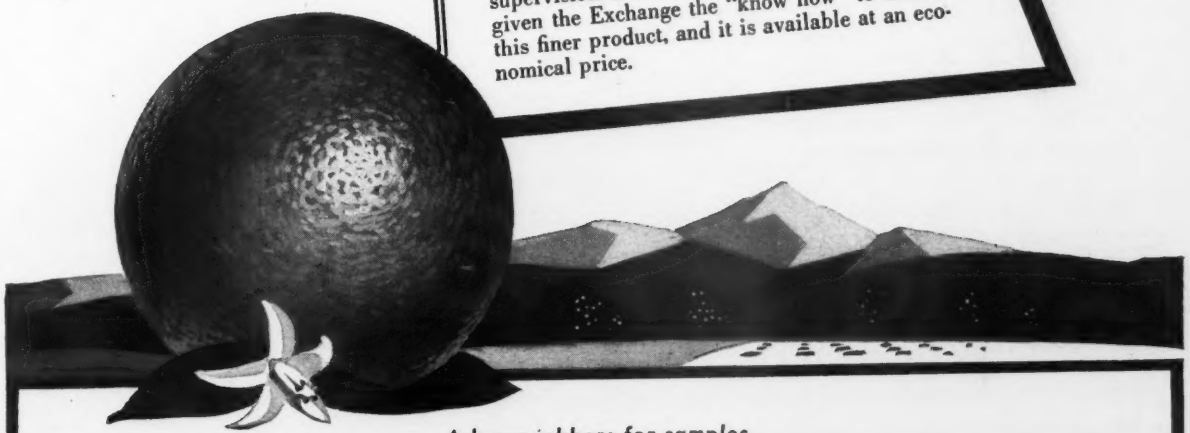

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Drug & Cosmetic INDUSTRY

JANUARY 1943

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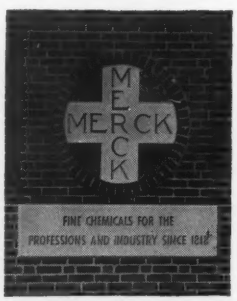

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INSIDE NEWS

JANUARY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1943

Two New Methods for Processing Fish

Save Time, Labor and Yield Superior Canned Product

Two methods of processing fish before canning, which have many advantages over present methods of production, have been developed through experimental work undertaken by the Fisheries Research Board of Canada through its Pacific Coast stations. One of the new methods involves smoking, the other steaming.

The product prepared by smoking had a better appearance than the usual raw pack, each fish being entirely separate and firm enough to be lifted out of the can in its entirety. In the smoking precedure, fresh herring were scaled, dressed and washed, then they were brined in saturated brine for 15 minutes. After being spread on ½-inch mesh wire trays, the fish were placed in a smokehouse previously heated to 150 degrees F. and were smoked for 30 minutes, using wood shavings and sawdust. After smoking, the fish was sufficiently dried so that it could be handled and packed in cans with ease. The next step was to pack the product in 1-lb. oval or tall cans with about 2 ounces of tomato puree added to each can. The cans were then steamed for 12 minutes with the lids merely resting on top of the cans and then the containers were closed and the product cooked for 90 minutes at 250 degrees F.

The steaming technique preparatory to canning produced a pack with an attractive appearance. The fish were firm and retained their shape even when lifted out of the can, and the flavor and odor were very good. In steam-packing, fresh herring were scaled, dressed and spread on wire screens and steamed from 5 to 10 minutes in a closed retort. The fish were then placed in the smokehouse (which in this case was operated as a drying unit) and dried in a current of warm air for 30 minutes. They were then packed in tin cans and cooked as was done with the smoked pack.

See Progress Report No. 52, Pacific Fisheries Experimental Station, Vancouver, B.C., of the Fisheries Research Board of Canada. (250)

Argentina to Export Yerba Mate to U. S.

South American interests in Argentina have sold to a United States firm 5,000 tons of yerba mate for delivery before the end of 1942. The sale has excited considerable interest in the future export possibilities of this herb. The government of Argentina has issued a decree authorizing the intensification of production of mate. As a result of exhaustive laboratory tests made during the last year in the United States, the mate will be submitted to large-scale processing for the extraction of valuable chemical substances, especially chlorophyl. The present local production of mate is estimated at 72,000 tons annually. (251)

* * * * *

To prevent scurvy from Vitamin C deficiency in war areas, over 500,000 gallons of concentrated fruit juice will be shipped abroad in individual containers. When concentrated the syrup holds 85% of the original vitamin content.

AMA Orders First Dehydrated Pork fo. Overseas Shipment

The U. S. Department of Agriculture reveals that the Agricultural Marketing Administration has awarded its first contract for dehydrated pork for shipment overseas. The AMA buys all food for Lend-Lease shipment. The new product, which never has been on the commercial market, is made of pre-cooked, fresh, extremely lean pork. Granular in shape, its color and texture are similar to brown sugar.

Dehydrated pork has about one-third the volume of the original boneless meat and weighs about one-fourth as much. Large-scale drying and dehydration of other farm products for Lend-Lease shipment—such as dairy products, vegetables, fruits and eggs—already has saved thousands of tons of shipping space in getting urgently needed food products to the allied nations.

Although in the experimental stage when the war began, meat dehydration has made rapid strides under the impetus of wartime needs for concentrated foods. Large scale production has been encouraged by government orders and it is expected that by early next year at least 10 processors, mainly in the mid-west, will be producing the concentrated pork. It is now being substituted for beef, as there is a greater supply of pork generally available. (252)

* * * * *

Glue factories are having a race to keep up with the increased demand caused by substituting wood for metal and restricting the manufacture of nails.

* * * * *

Venezuela can supply upward of a million pounds of silk cocoons a year. Mulberry trees, diet of silk worms, flourish there.

NATIONAL CAN

PLANTS: NEW YORK • BOSTON • BALTIMORE • CHICAGO • HAMILTON, OHIO • FORT WAYNE, INDIANA

New Process Yields Alcohol From Wastes

Smokeless powder and synthetic rubber can be made cheaply and abundantly using alcohol from watery wastes now poured down the sewer. Waste liquors from paper mills and other industrial plants, as well as sawdust, straw, cornstalks and other agricultural wastes, contain sugars capable of being fermented into alcohol. But the solutions are so thin and watery that the fuel needed for distillation is worth more than the alcohol that could be obtained.

Key to the riddle is fusel oil. Fusel oil dissolves alcohol but will not mix with water. So it is put to work getting the alcohol out of the watery wastes. Subsequently a chemical divorce between the alcohol and the fusel oil is arranged. A similar use of fusel oil can be made in getting acetone and other valuable industrial solvents out of solutions until now considered too thin to be profitably worked. (253)

New Toxic Agent For Insect Sprays

Thanite, a remarkable new toxic agent for insect sprays, is relieving the insecticide manufacturer from dependence upon foreign sources of supply. The usual imported toxic ingredients — pyrethrum, derris, cube and others—are becoming almost impossible to obtain. Insecticides are helping to win the war by enabling the farmer to get better production. They are also instrumental in the control of disease. Thanite is being produced from domestic raw materials available in quantity. In the past season it was just getting into production. Next year it will be used extensively. Chemically it is known as secondary terpene-alcohol thiocyanyl acetate and is a stable compound. (254)

Free Room and Board For War Workers

As part of its wartime speed-up program, a large canning company in New Jersey has made special arrangements for the lodging, feeding and transportation of the extra workers employed. Free lunches for all workers are served in the company cafeterias and other meals are sold at minimum prices in the camp mess hall. Some of the workers get free lodging in a former CCC camp six miles from the plant, with free transportation between the camp and the plant. (255)

* * * * *

Barrels are being constructed of plywood in Germany, according to reports reaching the Department of Commerce. The walls of the barrel are wound in puttee fashion in three overlapping layers and opposite directions over a metal core, after which strips of veneer treated with synthetic resin are applied.

Technical Topics

CELLULOSE—Several species of native and imported bamboo grow along the Gulf coast of Texas and Louisiana. No plant can produce as much cellulose per acre as certain species of bamboo. (256)

FUELS—A truck, fitted with a gas producer originally designed for anthracite, has been running on sawdust in Great Britain. Diesel trucks in tests have shown good performance using vegetable oils grown in West Africa—peanut, cottonseed and palm oil. (257)

PECAN SHELLS, long of no industrial value, are being used in the production of activated charcoal as a filler for gas masks. Many thousands of pounds will be processed in a 95,000 square foot factory reconditioned for this work. (258)

FISH LIVER OILS—Uruguay's fish industry reports several fish with liver oil far greater in vitamin A content than cod, required by international standards to have at least 800 units of vitamin A per gram. Among these are hake, averaging 18,000 units per gram, corvina, 26,000 units per gram, bagre from 90,000 to 100,000 units per gram. (259)

BITUMEN EMULSIONS, in which soap acts as an emulsifying agent, are being employed in Britain in blacking-out conspicuous surfaces, such as roadways. The dilute bitumen emulsion is applied to the roadway and then dusted with coal. A cheap and durable blackening effect is said to result. (260)

ALGIN is being investigated in Eire in connection with the making of waterproofing agents and plastic materials. Tests have also proved it to be a satisfactory substitute for sago flour in the sizing of twine. Its possibilities as a starch substitute are being studied. (261)

ROSIN usually free from impurities and clean and bright in appearance is claimed to be easily produced by a process described in a recent U. S. patent assigned to the Secretary of Agriculture. Basis of the process is the drying of the crude oleoresin by the addition of turpentine near the end of the normal distillation period, so that the whole mass may be readily filtered through various clarifying media, including paper. (262)

SODIUM METASILICATE and an alkyl sulphonate are combined in a new preparation suggested for cleaning bright steel surfaces difficult to clean. The sulphonate reduces the surface tension and assists the metasilicate solution in removing the grease film after two seconds contact. (263)

WAX BLEND—Carnauba wax may be substituted with a blend of beeswax, shellac wax, and sal dammar, it is suggested by an Indian Forest Research Institute. The compound is a blend of eighty-five parts of shellac wax, ten parts of beeswax, and five parts of finely ground sal dammar. (264)

SULPHURIC ACID has been found effective in increasing the gum flow of pine trees employed for naval stores production. Tests on slash pine showed an average increase of 25 percent in the gum flow when a 40 percent solution of sulphuric acid was applied directly to fresh streaks immediately after chipping. More than 100 possible stimulants were investigated in the tests, but sulphuric acid gave the best results. (265)

INVISIBLE INSECTICIDE—A new invisible insecticide paint is being marketed for use on windows and door screens in army cantonments, and for the hotel and restaurant trade. (266)

ACID DETERGENTS are opening a new era in food sanitation. The major objections to the use of acid detergents in the past have been their inherent corrosiveness, poor penetrating and peptizing properties, and general lack of other cleaning characteristics. These drawbacks have now been largely overcome. (267)

CITRONELLA — Geraniol and citronellal separation from citronella oil by an improved method is claimed in a recent British patent. The procedure comprises mixing the essential oil with reactive amine and thus causing the reactive aldehyde to form a condensation product of relatively high boiling point. The volatile noncarbonyl compound is then separated by distillation. (268)

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquirers to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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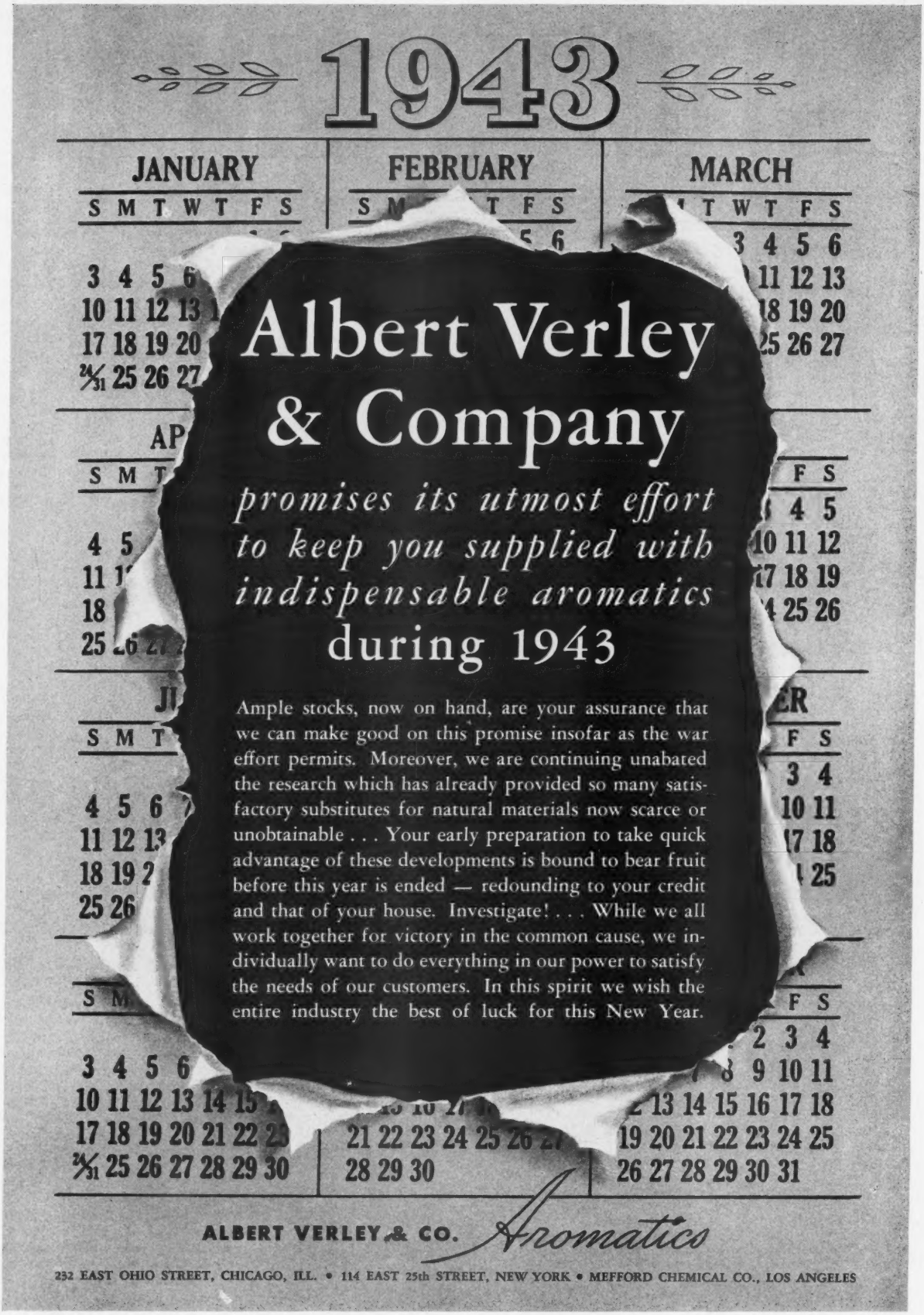
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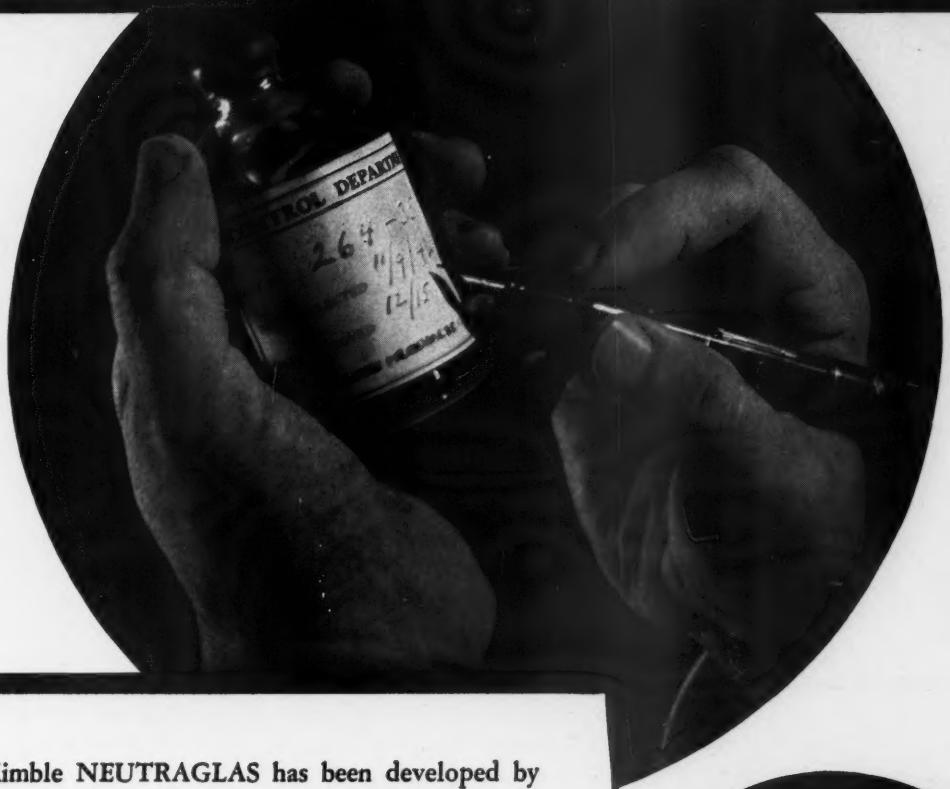

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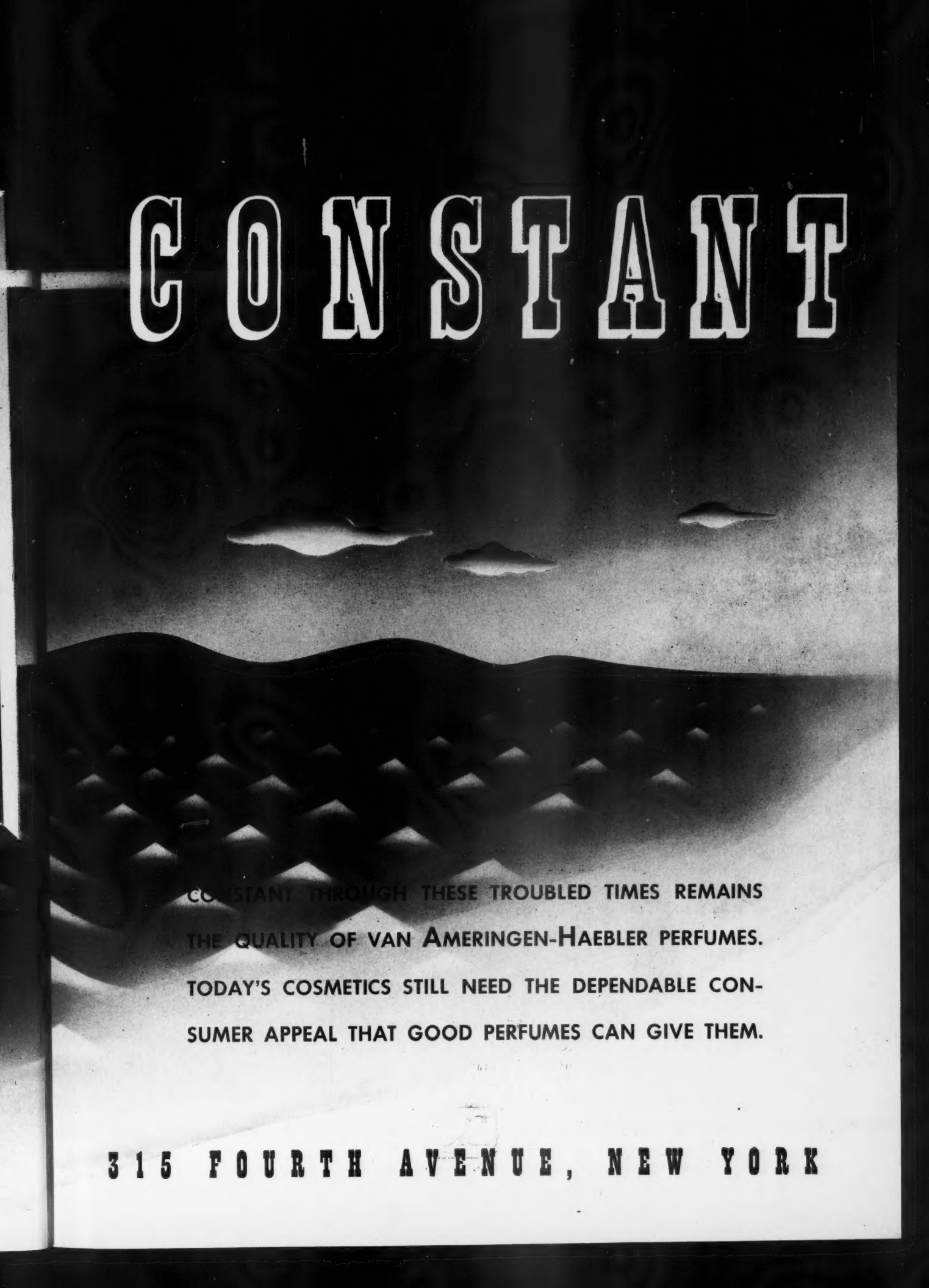
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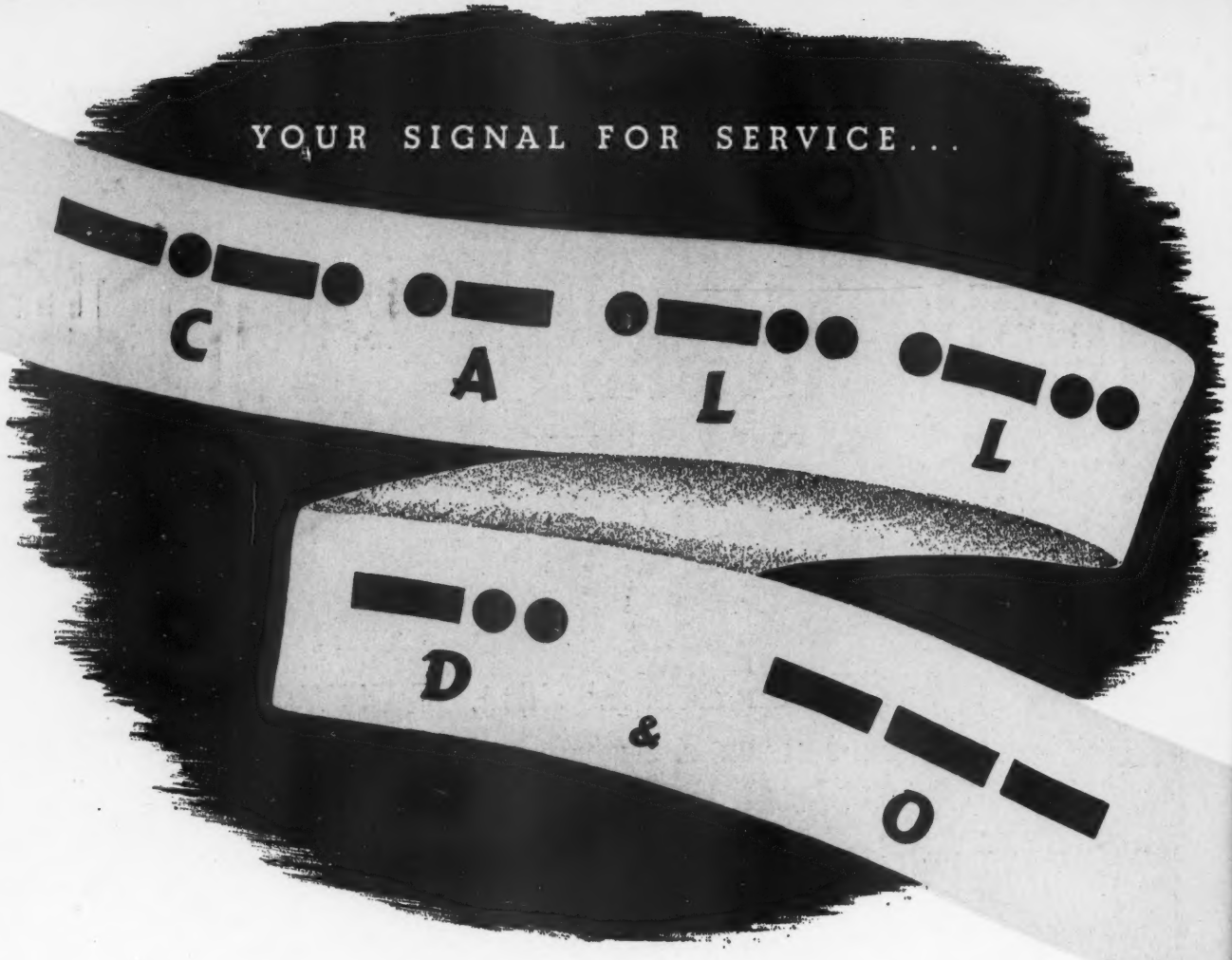

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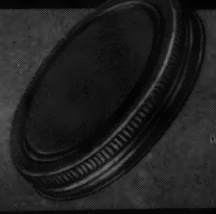

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The hands behind the hand that applies your cosmetics must of necessity be experienced, versatile, thorough, energetic and competent hands.

To these hands you, as a manufacturer, entrust your reputation. They hold the future of your business. For this very reason, expert knowledge must be at their fingertips. They must be the composite hands of an artist, scientist, craftsman, and business executive. These skilled hands must protect you against error. They must win consumer recognition and acceptance. And they must assure repeat sales.

Because Allied recognizes the great responsibility that it has to its customers, vigilance at this great plant is never relaxed. Constant rigid inspection by expert technicians of every product leaving the Allied plant is the reason for Allied's reputation for consistently high quality products. From the basic formula to the completed package on your dealer's shelf, every operation that has contributed to the finished product reflects the experienced hands that have been schooled in the Allied tradition of perfection.

Make the Allied Products Manufacturing plant, with its thousands of busy and skilled hands, *your* own manufacturing plant.

ALLIED PRODUCTS, Inc. • 30 Rockefeller Plaza, N. Y. C.

Private Brand Specialists. • Makers of the world's finest cosmetics and toiletries

Plant and laboratories • Suffern, New York • 1015 St. Alexander St., Montreal, Que.

M M & R REPLACEMENTS

For Hard-to-Get and Currently High Priced

ESSENTIAL OILS

and Related Products

More than 50 replacements for currently high priced, wholly unavailable or hard-to-get Essential Oils and Related Products are now available under the M M & R label, seal and guarantee.

These are not spur of the moment *"war babies"* but thoroughly tested and approved products that are being used extensively now with genuine satisfaction. All are priced well below the products they are intended to replace, yet many have proved themselves superior, in numerous instances, to the commonly used oils.

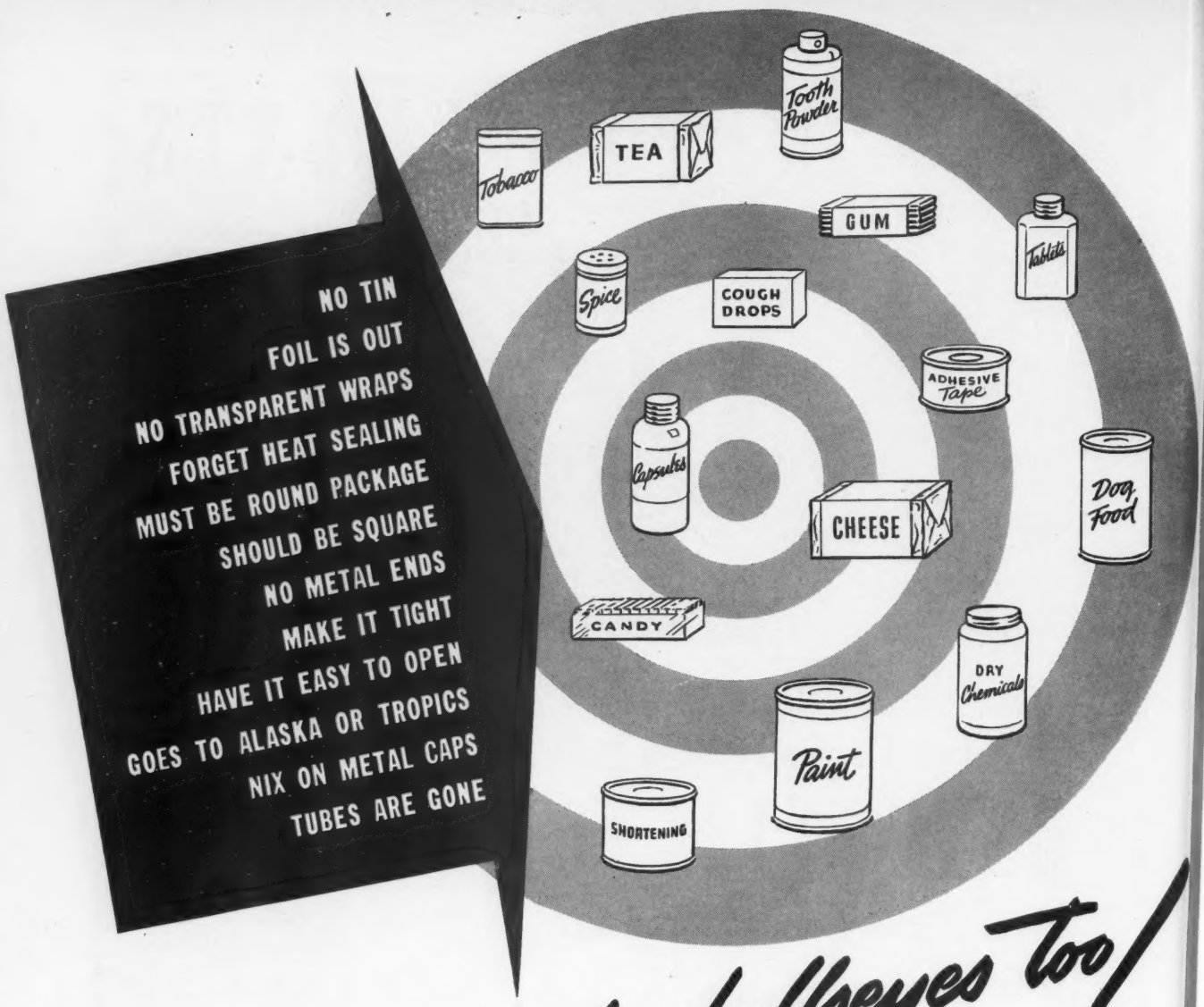
Brochure listing M M & R replacements mailed upon request

MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS, AROMATIC CHEMICALS, BASIC PERFUMES, FLAVORING MATERIALS — SINCE 1895

16 DESBROSSES STREET, NEW YORK CITY • 221 NORTH LASALLE STREET, CHICAGO

OFFICES IN PRINCIPAL CITIES • CANADA: RICHARDSON AGENCIES, LTD., TORONTO



We're trying for bullseyes too!

•Fitting strange packaging materials to even stranger products—in a rush—with present equipment is a real job. The questions soon begin to pop faster than the right answers. And though in the work we're doing much has been accomplished in a short time—much more remains to be done.

Yes, we will give your problem the best our specialized experience and research can produce. But the solution may run into the obstacle of scarce materials or forming, sealing, filling, and product difficulties. That's why we ask you to give us all the time and cooperation you can—it will help to make better winners for both of us!

★ Ridgelo ★
CLAY COATED

COATED AND SPECIALTY PACKAGING MATERIALS
FOR CONVERSION AND ESSENTIAL USES.

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

YOU CAN'T PHOTOGRAPH MORALE

It is an intangible quality in free men that makes a Corregidor...a Wake Island... that keeps the people of Malta still smiling and "thumbs up" on a decimated isle . . . that sends a Chinese stripling to harass a far better equipped foe . . . or that makes the guerrilla bands in the steep recesses of the Jugoslavian mountains and the unyielding defenders of Stalingrad—the terror of the Wehrmacht.

Morale makes for victory, and our industry has a recognized responsibility in the effort. In this war, women play a more important role than ever before, and Britain for one, has become keenly aware of the value of cosmetics.

We must not stay production. When prize formulae are affected by shortages and priorities, we are charged with the finding of suitable substitutes . . . acceptable alternatives.

Many manufacturers, turning to us, as experts in the field of synthetics for more than a quarter of a century, have been able, through us, to secure reproductions of unavailable or price-prohibitive ingredients. Accurate . . . Available, *Florasynthetics* are not secondary replacements, but have long been recognized as *primary* essentials in the successful manufacture of perfume, lotions and other toiletries.

Florasynth **LABORATORIES, INC.**

1533 OLMSTEAD AVE., NEW YORK, N. Y.

CHICAGO • DALLAS • DENVER • LOS ANGELES
NEW ORLEANS • SAN FRANCISCO • SEATTLE

Florasynth Labs. (Canada) Ltd. — Montreal • Toronto • Vancouver • Winnipeg
Florasynth Laboratories de Mexico S. A. — Mexico City

FOR VICTORY BUY U. S. WAR STAMPS AND BONDS

For Fine Chemicals

Specify HEYDEN

MEDICINAL CREOSOTE
AND GUAIACOL PRODUCTS

These products meet every requirement of the pharmaceutical manufacturer. Their color, odor and taste evidence the high purity and uniformity characteristic of Heyden Chemicals.

CREOSOTE U. S. P.
CREOSOTE CARBONATE U. S. P.
POTASSIUM CREOSOTE SULFONATE
BEECHWOOD CREOSOTE U. S. P.
CALCIUM GUAIACOL SULFONATE *Powder*
GUAIACOL CARBONATE N. F. *Crystals*
GUAIACOL CRYSTALS, U. S. P.
GUAIACOL LIQUID, U. S. P.
MAGNESIUM GUAIACOL POWDER *Powder*
POTASSIUM GUAIACOL SULFONATE N. F. *Crystals*

Write for complete products list

FINE HEYDEN CHEMICALS

HEYDEN *Chemical Corporation*

NEW YORK—50 UNION SQUARE

CHICAGO BRANCH—180 N. WACKER DRIVE

Names aren't always especially revealing . . . a few little letters strung together phonetically may fail, completely, to make any clear cut impression on the mind.

So, when in your search for a new source of glass containers, the name CARR-LOWREY is suggested, it may not be symbolical of anything . . . to you.

Nevertheless, it *is* representative of a group of marketing, designing and production specialists whose skilled and experienced handiwork has wrought the glass packages which today enclose many of America's best known cosmetics, drugs, household and food products.

Painstaking attention to detail . . . extreme concern about precision . . . continuous insistence upon accuracy . . . these, too, are all synonymous with the name CARR-LOWREY.

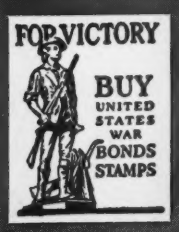
No, *you never can tell* what is back of a name like ours . . . unless you've had the pleasure of working with an organization like ours.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD.
New York Office: 500 Fifth Avenue
Chicago Office: 1502 Merchandise Mart

TOTAQUINE

Specify NYQ *on your orders*



NYQ

GENERAL OFFICES
99-117 North Eleventh St.
Brooklyn, N. Y.

ST. LOUIS DEPOT
915 Market Street
St. Louis, Mo.

Symbol of Quality

THIS NYQ LABEL CARRIES WITH IT SIXTY-SEVEN YEARS OF EXPERIENCE

The Master Creates

The artist touches his brush to the canvas and a form begins to take life. The colors subtly blend—lines become action...a picture is born! And here in our Perfume Laboratories are born the odors of lovely flowers. Fragrant odors—fresh and demure... exotic and sophisticated. So like the natural flowers that the most discriminating connoisseur can hardly tell them apart. One of our loveliest creations—Woodland Muguet, is available for your complete line of perfumes, creams, powders and soaps.

We'll be glad to send you samples and prices.

Aromatic Products, Inc.

15 EAST 30th STREET, NEW YORK, N. Y.

Atlanta • Chicago • Dallas • Memphis • Pittsburgh

STANDARD SYNTHETICS
INCORPORATED

Manufacturers of

AROMATICS
PERFUME BASES

Direct Importers of Spanish Oils — Rosemary, Spike Lavender, Sage, Thyme

●

We are now able to offer fine quality Imitation Oil of Cassia in large quantities and welcome your inquiries. Please write for sample.

●

SYNTHETIC PERFUMES
CITRONELLA ART
LEMONGRASS ART
LAVENDER ART
GERANIUM ART
BERGAMOT ART
CASSIA ART
CEDARLEAF ART
ROSEWOOD ART
PATCHOULY ART

Distillers of

ESSENTIAL OILS

Special Compounds for All Kinds of Soaps, Disinfectants, Sprays and Insecticides

SAMPLES SUBMITTED GLADLY. SEND US YOUR PROBLEMS.

STANDARD SYNTHETICS, INC.

119 WEST 25th STREET — **NEW YORK, N. Y.**

BRANCHES IN: CHICAGO — SAN FRANCISCO — KANSAS CITY, MO.

THINGS TO COME

In this black night of materials shortage, wartime manufacturing restrictions, and necessary changes in formulation and distribution, there is one comfort: the sun always rises. Someday, all the brakes will be released; all our ingenuity can be directed to supplying a brave new world.

But the fact that morning will come does not diminish the darkness of the manufacturing picture at this hour. Already, there are signs that the darkness may deepen . . . that more restrictions are ahead . . . that cross-hauling may be eliminated by order (with a sharp change in distribution methods) . . . that more and more materials may be unobtainable. Too, replacement of materials may obsolete present equipment . . . with new equipment impossible to find.

Under such conditions, our organization is at your service. We have a research staff of more than 300 man-years of experience to draw upon for the solution of your reformulation and replacement problems. Our manufacturing department, well-equipped and with a thoroughly trained personnel, can swing into production of your product as it has for so many important firms in the cosmetic and allied industries.

Packaging, testing, and the medical observation of results are also part of our unique service to you at this time. We shall be glad to send you further details of our facilities . . . and how you may find in them the answers to your problems today.

EVANS CHEMETICS, INC.
250 East 43rd Street, New York
Telephone: Murray Hill 3-0077

EVANS CHEMICALS, LTD.
Boreham Wood, Herts, England
for your English post-war production

★ *Manufacturing Chemists with Unique Research Facilities* ★

You can use

ISOPROPYL ALCOHOL

Supplies available

ISOPROPYL ALCOHOL may be used for:

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

HAIR AND SCALP PREPARATIONS: Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly; has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

SHAMPOOS: Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

VITAMIN PREPARATION: Use Isopropyl Alcohol for the manufacture of Vitamin B_1.

STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

LINIMENTS: Isopropyl Alcohol may be used in the manufacture of chloroform liniments.

EXTRACTION OF ALKALOIDS: Isopropyl Alcohol may be used for extracting belladonna, aconite, nux vomica and cinchona.

STANDARD ALCOHOL COMPANY

THE ORIGINAL SYNTHETIC SOLVENT MANUFACTURERS

26 BROADWAY, NEW YORK, N. Y.

discord or
FIXATEUR
LIQUID ?
For the fusion of discordant odor forces . . . . Naugatuck's Research developed FIXATEUR LIQUID . . . . a tried, tested and successful "Blender and Fixer"

NAUGATUCK AROMATICS

DIVISION OF UNITED STATES RUBBER COMPANY

254 FOURTH AVENUE • NEW YORK, N. Y.

215 W. OHIO STREET, CHICAGO, ILL. • H. M. ROYAL, Inc., 4814 LOMA VISTA, LOS ANGELES, CALIF.

NAUGATUCK CHEMICALS LTD., ELMIRA, ONTARIO, CANADA

Sole Representatives for: BRUNO COURT, S. A., GRASSE, FRANCE C. A. P. P., CASABLANCA, MOROCCO

RESINS

BALSAM PERU
BALSAM TOLU
OLIBANUM
LABDANUM
OPOPONAX
STYRAX

OILS

CLOVE
CUBEBS
PATCHOULY
SANDALWOOD
OPOPONAX
CARDAMOM

L U E D E R S

TRUE FRUIT

RASPBERRY
STRAWBERRY
PINEAPPLE
WILD CHERRY

PURE NATURAL CITRUS FLAVORS

LEMON
ORANGE
LIME

L E R S

EST. ~~~~~~~~ *1885*

GEORGE LUEDERS & CO.

427-29 WASHINGTON ST. — NEW YORK

CHICAGO · SAN FRANCISCO · MONTREAL

REPRESENTATIVES: SAINT LOUIS PHILADELPHIA

KOLMAR *Announces...*

THE PERFECT POINT LIPSTICK FILLERS

These lipstick points are "shaped like the lips" . . . eliminate dabbing . . . lips can be shaped sharply and cleanly in one stroke. Points stay sharp.

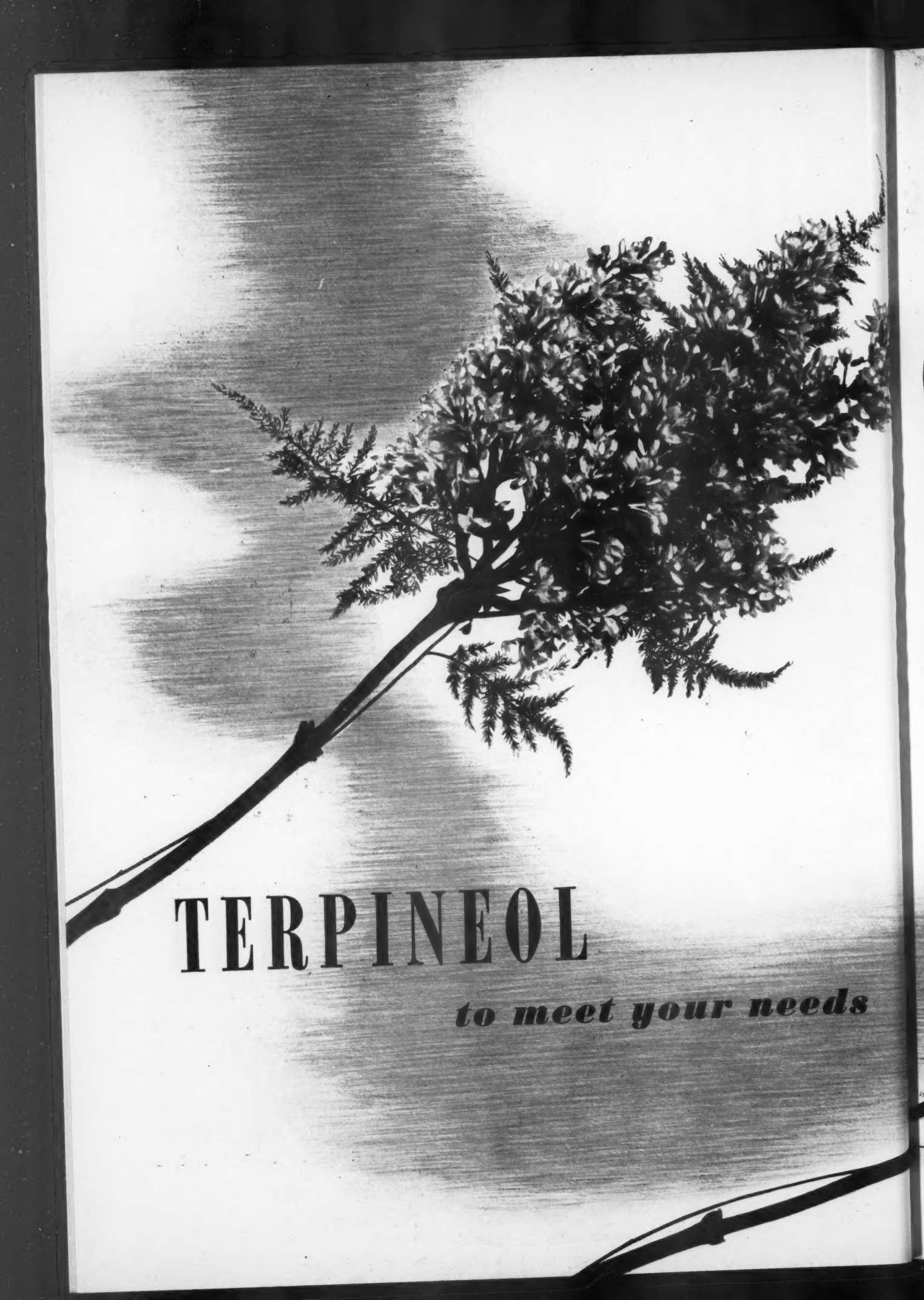
Protected by patent and patents pending.

Kolmar is prepared to make reasonable arrangements with other manufacturers of lipsticks and license them to make the points shown above . . . . . .

. . . another FIRST for Kolmar

KOLMAR *Laboratories*

MILWAUKEE • NEWARK


TERPINEOL
to meet your needs

PAST PERFORMANCE—AN INDEX FOR THE FUTURE

For more than sixteen years Givaudan has been producing a Terpineol that for quality and uniformity has been recognized as outstanding by users throughout the cosmetic industry.

This quality and uniformity was still further improved in 1937 by a new method of fractionation by distillation in vacuum, using specially designed apparatus.

The years of experience gained in research and production of Terpineol are proving of great value to Givaudan customers today, for they are assured of a completely dependable source of supply and expert counsel in regard to its use. Here is a typical example of how Givaudan foresightedness is helping to maintain the flow of materials during wartime. If you need high quality Terpineol, order from Givaudan now—your needs can be met promptly.

GIVAUDAN-DELAWANNA, INC.

330 WEST 42ND STREET, NEW YORK, N. Y.

OUR PLANT FACILITIES ARE AVAILABLE FOR ANY FURTHER CONTRIBUTION WE MAY MAKE TO PRODUCTION OF MATERIALS FOR THE WAR EFFORT

If You are Looking for This..

WE HAVEN'T GOT IT

However, if you are looking for dependable and available materials we can supply your needs.

Leading manufacturers have depended upon us for years for the materials necessary to maintain the high quality of their finished products.

Aromatics Division

GENERAL DRUG COMPANY

644 Pacific St., Brooklyn, N. Y.

9 S. CLINTON STREET, CHICAGO

1019 ELLIOTT ST., W., WINDSOR, ONT.

TO BE DELIVERED

at 1,000 feet per second

Every refinery and plant in the American petroleum industry has been making Government cooperation for Victory its first consideration. This condition will be continued until we win.

• • •

Directly and indirectly, literally thousands of products and by-products in this basic field are serving our armed forces. Products which in peace times are available in any quantities which suit your production schedules are in some cases limited today. Ingredients which normally find their way to dressing tables via delicately scented cosmetics may now be expediting the delivery of a demolition bomb.

• • •

War brings accelerated research as well as necessary diversion of the materials of peace times. With victory, expect even greater things of the Sonneborn Refineries. And for now, be assured that every order will be filled as completely and promptly as all-out War effort permits.

Where quality counts—Count on Sonneborn.

WHITE MINERAL OILS

KAYDOL U. S. P. Heavy
ORZOL U. S. P. Heavy
PURITAN U. S. P. Heavy
ERVOL U. S. P. Light
BLANDOL U. S. P. Light
CARNATION
KLEAROL

PETROLATUMS U. S. P.

TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

TYPE II: *Soft Consistency — White Fonoline — Yellow Fonoline*

TYPE III: *Medium Consistency With High Melting Point —White Perfecta*

SPECIALTIES

FYBRENE WAX—Amorphous (micro-crystalline) wax for pharmaceutical and cosmetic formulation.

SONO-JELL—Complete series for liquefying cleansing creams, pomades, ointments, etc.

DEO-BASE—Light hydrocarbon distillate refined to complete freedom from kerosene odor.

L. SONNEBORN SONS, INC.

Refiners of White Mineral Oil and Petrolatum. Refineries: Petrolia and Franklin, Pa.

NEW YORK · CHICAGO · BALTIMORE · PHILADELPHIA · LOS ANGELES · Stocks Carried in Principal Cities

Southwestern Distributors: Sonneborn Bros., Dallas, Texas

HELFRICH

Three Way Service

for those who sell cosmetics and insist on high standard sales-tested powders, lipsticks, creams, lotions, rouges

One — You can buy Helfrich-perfected cosmetics in bulk and package them at your shipping headquarters.

Two — You can send us your own containers for filling at one of our plants.

Three — Or, if you desire, we will sell them to you in complete individual package units—using any standard containers you select—so that they will be ready for you to ship to dealers or sell direct to consumers.

WE make private brand cosmetics exclusively. We do not compete with those we serve.

Helfrich Cosmetics increase your sales and safeguard your reputation. Write today, on your letterhead, for samples that will convince!

lipsticks • *creams* • *lotions*
rouge compacts • *creme rouge* • *face powder*
powder compacts • *eye shadow* • *cosmetique*

HELFRICH
LABORATORIES

HELFRICH LABORATORIES • 564-570 West Monroe Street, Chicago
HELFRICH LABORATORIES of N. Y. Inc., 151-163 West 26th St., New York
HELFRICH LABORATORIES OF CANADA, Ltd., 690 King St. West, Toronto, Ont.
CABLE ADDRESS: HELFLABS, NEW YORK . . . CHICAGO . . . TORONTO

All inquiries and correspondence west of the Rocky Mountains should be addressed to our Chicago plant.

SOMETHING NEW

TO BE ADDED TO YOUR LINE

To bridge the void left by alcoholic restrictions we urge you to examine our

BASE for CREAM COLOGNE

LIQUID TYPE

Produces a very easily diffused product of vanishing cream lotion type.

Perfume added by cold process. Very easy to prepare.

Cost to prepare $.70 per gallon (without the cost of perfume).

Use your regular line of perfume scents that have been used in your alcoholic product or write to us for samples of perfume oils which we will be glad to select for you.

Send for samples and particulars.

COMPLETE LISTING OF PERFUMES

for all products now available in

CATALOG "B" — "PERFUME SPECIALTIES"

DREYER

P. R. DREYER INC.

119 WEST 19th STREET

NEW YORK, N.Y.

DREYER

INDOLINE

Not a substitute for INDOL but a product superior in

LASTING QUALITY
SWEETNESS and
PERFUME VALUE

Please Write for Free Sample

Norda

ESSENTIAL OIL AND CHEMICAL COMPANY, INC.

NEW YORK OFFICE
601 WEST 26TH STREET

CHICAGO: 325 W. HURON STREET
LOS ANGELES: 2800 E. 11TH STREET
ST. LOUIS: 1123 WASHINGTON AVE.
FRANCE: PLACE VENDOME, 8, PARIS
ST. PAUL: 253 E. 4TH STREET
HAVANA, CUBA: SAN LAZARO #671
CANADA: 119 ADELAIDE ST., W. TORONTO
135 COMMISSIONERS ST., WEST, MONTREAL
ENGLAND: 17 CREECHURCH LANE, LEADENHALL ST., LONDON, E. C. 3

EDWAL CHEMICALS

Acetylacetone
p-Acetylaminophenol
Acetylpropionyl
Allantoin
Alloxan Monohydrate
Allyl Alcohol
Allyl Amine
Allyl Bromide
Allyl Chloride
Allyl Thiourea
Aluminum isopropylate
Aminobenzthiazole
Ammonium Thiosulfate
Anhydromethylenecitric Acid
Benzalazine
Benzaldehyde Semicarbazone
Benzotriazole
Bismuth Sodium Iodide
n-Butyl Bromide
Cetyl Bromide
Cetyl Iodide
Cetyl Pyridinium Bromide
Cetyl Pyridinium Chloride
Cetyl Pyridinium Iodide
Chlorohydroquinone
Decamethylene Dibromide
Decamethylene Glycol
Diacetylaminoazotoluol
Diallyl Disulfide
Diallyl Sulfide
Diaminophenol Dihydrochloride
1-Diazo-2-Naphthol-4-Sulfonic Acid
Diazosulfate of p-Aminodiphenylamine
p-Diethoxybenzene
o-Dihdroxybenzene
Dimethylaminoazobenzene
Ethyl Iodide, C.P.
Hexamethylene Tetramine Anhydromethylene Citrate
p-Hydroxphenyl-aminoacetic Acid
1-Methylallylamine
Methyl Iodide C.P.
Monoacetylaminoazotoluene
Nitranilic Acid
sec-Octylbromide
sec-Octyl Malonic Ester
Oil of Mustard, Artificial, U. S. P.
Parabanic Acid
o-Phenylenediamine
p-Phenylenediamine
Phenyl Mercuric Acetate, C.P.
Phenyl Mercuric Hydroxide
Phenyl Mercuric Naphthenate
Phenyl Mercuric Nitrate, C.P.
Phenyl Semicarbazide
Phloroglucinol
Phthalonic Acid
Propionyl Acetone
Quinine Bismuth Iodide
Semicarbazide Hydrochloride, Pure
Semicarbazide Hydrochloride, Tech
Sodium Cyanate, 95%
Uric Acid, Purified
Uric Acid, Tech.

Write for new catalog 26D!

Keeping **SECRETS** *Is* **EDWAL'S** *Business Too!*

FREE BROCHURE

Bulletin 21D, "How The Independent Chemist Can Help You", explains Edwal services in greater detail. Send for your copy now.

Many companies engaged in war production are turning to Edwal, not only for special chemicals which are difficult to obtain, but also for assistance in handling research problems. For some of these manufacturers Edwal is now busy formulating new products to be presented when victory has been won.

For other companies, Edwal is developing improvements in processes that will mean production at lower cost and increased profits. Why not put your chemical research problems up to this staff of experienced chemists and chemical engineers?

EDWAL

The **EDWAL** *Laboratories, Inc.*

Manufacturing Division

732 FEDERAL STREET CHICAGO, ILLINOIS

AVERTING SHORTAGES...

Ouabain

● Known to every pharmaceutical chemist, little used commercially, but important as a U.S.P. reference standard, OUABAIN was manufactured almost exclusively in continental Europe.

As is the case with other standard products used for comparative purposes, OUABAIN was and is still supplied by the U.S.P. Board of Trustees *only*, when reference material is needed.

Hitherto, it has been commercially unimportant but now also has the standing of a monograph in the forthcoming U.S.P. XII as an official heart drug.

For therapeutic purposes, OUABAIN is required to contain 18-22% moisture, while the reference standard contains 12½% moisture.

To provide OUABAIN of American manufacture, it required persistence to locate the proper botanical source. It took energy and resourcefulness to get raw material safely to the United States; and most of all, the manufacture of OUABAIN demanded the chemical skill that comes only from long experience in the manufacture of similar preparations.

OUABAIN, conforming strictly to official monograph standards and of the highest purity, is amply available from the stocks of S. B. Penick & Company. Here again there is no prospect of disappointment in supplies even though two years ago OUABAIN was imported.

Number 3 of a series of advertisements on how S. B. PENICK & COMPANY is helping to avert shortages in important plant alkaloids which hitherto were imported from Europe.

S. B. PENICK & COMPANY

ALKALOID EXTRACTING MANUFACTURERS

50 Church Street
New York, N. Y.

735 W. Division Street
Chicago, Illinois

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

THIS IS *Packaging Insurance*

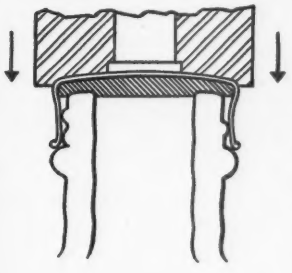
Protection is what Packaging Insurance (the Alseco Rolled-On Method of sealing) gives you. With an R-O Seal, your product is protected against leakage and evaporation because each R-O fits its own particular container *exactly*. See diagrams at right.

You're guarded against dealer complaints that develop when a product fails to live up to standard.

You're guarded against consumer ill-will by the fact that R-O's keep your products just as you make them. And yet they're easy to remove—never wedged or cocked.

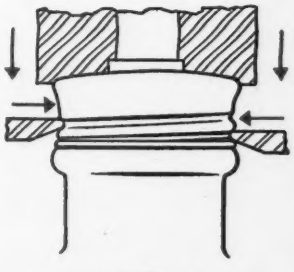
Which all adds up to Packaging Insurance.

HERE'S WHY YOU GET "PACKAGING INSURANCE" BY THE ROLLED-ON METHOD OF SEALING



1. Plain-skirted Alseco Seal is uniformly seated. Under stationary top pressure, container lip is embedded in liner evenly all around.

2. While held in that position, threads are Rolled-On to conform exactly to threads on container. Each seal is tailor-made, fits perfectly.



Trade Mark Reg ALSECO SEALS U S Pat. Off

Most of our facilities are now devoted to the manufacture of war materiel. Alseco Seals, however, can still be supplied, subject to regulations governing metal closures.

TAILOR-MADE

ALSECO SEALS

ALUMINUM SEAL COMPANY, 1323 THIRD AVE., NEW KENSINGTON, PENNSYLVANIA.
At your service: 28 years of experience building quality seals and sealing machines.

Engineered for High Uniform Purity

MALLINCKRODT POTASSIUM BICARBONATE

Here is an "All-American" product manufactured exclusively from raw materials of American origin. Mallinckrodt Potassium Bicarbonate is made by an entirely new process which yields a product of exceptional cleanliness and chemical purity. It is made and packed in air-conditioned rooms designed to effectively safeguard against the introduction of contamination in any form.

Mallinckrodt Potassium Bicarbonate is especially designed to meet the most exacting medicinal and food requirements where assured freedom from contamination is of paramount importance. If you require Potassium Bicarbonate for any use — in medicinal or food products, in an industrial process, as an analytical reagent in the laboratory —

Mallinckrodt Has the Grade and Mesh You Need

GRANULATED • POWDERED • A. R.

FINE CHEMICALS
Mallinckrodt
SINCE 1867

MALLINCKRODT CHEMICAL WORKS

Mallinckrodt Street, St. Louis, Mo. 74 Gold Street, New York, N. Y.

CHICAGO • PHILADELPHIA • LOS ANGELES • MONTREAL

KEEPING POSTED

Closure Order

HEALTH supplies, chemicals, household and industrial products that may be packaged during 1943 are set forth in WPB conservation order M-104 as amended December 26, 1942. This order establishes control over the tinplate, terneplate, blackplate, and rubber that may be used. The new amendment provides as follows:

1. No person may use closures to pack any products, except as specified by the order. Blackplate closures may be used whenever tinplate or terneplate closures are specified. Closures made of waste materials may not be used for packing any product for which critical closures are totally prohibited. Jobbers or retailers may purchase and sell closures in conformity with the order.

2. No person may sell or deliver any closure made in whole or part of tinplate, terneplate, blackplate, wire, rubber or waste material unless the purchaser accompanies his order with a certificate certifying that the material will not be used in violation of M-104. However, no certificate is required for the sale or delivery of closures to retailers or persons purchasing from retailers.

3. Use of closures made of such material for the following is prohibited:

(a) Cover caps which serve as a protective or decorative closure in addition to the original closure or other medium of sealing, such as paraffin.

(b) Double shell or semidouble shell caps.

(c) Two-piece closures when both pieces are made of metal, except for home-canning purposes.

4. Use of tinplate, terneplate on blackplate in excess of 90 pounds per base box for manufacture of crown caps is prohibited. However, rejects or electrolytic waste in excess of such weight are allowed.

5. Use of tinplate for the manufacture of closures, with a tin coating in excess of 1.25 pounds per base box, is prohibited.

6. Canners and bottlers, who, during 1942, used less than 5,000 closures, may purchase and accept 5,000 closures a year without restriction.

7. Restrictions do not apply to purchase, acceptance, delivery or use of closures for packing any product not specified by this amendment if the closures, on or before December 23, were completely manufactured, or if the materials had been fully lithographed with the user's private design cut into strips.

8. Restrictions do not apply to orders placed by the armed forces, lend-lease and other specified government agencies and the United States territories.

The following restrictions apply only to closures for medical or health supplies and chemical, household and industrial supplies:

1. The amount of tinplate, terneplate, blackplate or rubber closures that may be used for most medical, chemical, household and industrial products is based on 100 per cent. of 1942 consumption. The use of closures for some of these products is unlimited.

2. Use of rubber for health supply closures is restricted to 10 products which must be sealed with rubber to protect their medicinal properties.

The following regulations apply to beverage closures:

1. Prime material for manufacture of closures for malt beverages and non-alcoholic beverages is restricted to the tinplate and blackplate already allocated for such purposes, which was in the inventory of the crown manufacturer or bottler on or before December 11, 1942.

This means that in the future no crown manufacturer may buy prime carbon steel from steel mills for use in crowns for beer or carbonated beverages. In the future, crown manufacturers can buy only rejects or scrap steel for beer and carbonated beverage crowns. As a result, approximately 60,000 tons of prime carbon steel will be saved annually for war materials.

Schedule I

Food Closures

Subject to the provisions of all applicable priorities regulations and orders of the War Production Board (including but not limited to Conservation Orders M-119 and M-126), and to the provisions of Conservation Order M-104 as amended September 26, 1942, any person may use for packing any food product for human consumption, closures made in whole or in part of tinplate, terneplate, blackplate, wire, or rubber. No closures made of such materials shall be used after December 31, 1942, for packing any food product, except in accordance with such quotas as may be established by the Director General for Operations.

Schedule II

Drug Products Closures

A. From December 23, 1942, to December 31, 1942, any person may pack without quota restriction any product listed in this Schedule II.

B. The packing quota relates to the number of closures and cans used for packing the applicable product.

Product, for medicinal or health purposes only	*1943 packing quota*	*Closure material indicated by x* Tinplate	Blackplate	Rubber
Alcohol, rubbing or medicated	100% 1942	.....	x	.....
Artificial salts	100% 1942	.....	x	.....
Biological preparations	Unlimited	x	.....	x
Blood plasma	Unlimited	x	.....	x
Capsules	100% 1942	.....	x	.....
Chemicals, dry	Unlimited	x	.....	.....
Chemicals, liquid	Unlimited	x	.....	.....
Citrate of magnesia	100% 1942	.....	x	x
Cordials, medicinal	100% 1942	.....	x	.....
Effervescent salts	100% 1942	.....	x	.....
Elixirs	100% 1942	.....	x	.....
Emulsions	100% 1942	.....	x	.....
Extracts	100% 1942	.....	x	.....
Flavors	100% 1942	.....	x	.....
Fluid extracts	100% 1942	.....	x	.....
Fluid glycerates	100% 1942	.....	x	.....
Glycerites	100% 1942	.....	x	.....
Glycerogelatins	100% 1942	.....	x	.....
Honeys	100% 1942	.....	x	.....
Jellies, aqueous	100% 1942	.....	x	.....
Liniments	100% 1942	.....	x	.....
Liniment of ammonia	100% 1942	x	.....	.....
Local anesthetic solutions (injectible)	Unlimited	x	.....	x
Lotions	100% 1942	.....	x	.....
Magmas	100% 1942	x	.....	.....
Medicinal wines	100% 1942	.....	x	.....
Oleoresins	100% 1942	.....	x	.....
Oleate	100 % 1942	.....	x	.....
Oils, fixed, volatile, or medicated	100% 1942	x	.....	.....
Ointments, cerates, petrolatum, pastes	100% 1942	.....	x	.....
Ointments, ophthalmic	100% 1942	x	.....	.....
Pills, tablets, troches, lozenges	100% 1942	.....	x	.....
Powders	100% 1942	.....	x	.....
Prescriptions	Unlimited	x	.....	.....
Proprietary preparations	100% 1942	.....	x	.....
Soaps	100% 1942	x	.....	.....
Solutions, aqueous or bulk intravenous	100% 1942	x	.....	x
Solution of ammonia	100% 1942	x	.....	.....
Solution of iodine	100% 1942	x	.....	x
Solution of hydrogen peroxide	100% 1942	x	.....	.....
Solutions, parenteral	Unlimited	x	.....	x
Solutions, ophthalmic or nasal	100% 1942	x	.....	.....
Spirits	100% 1942	.....	x	.....
Spirit of ammonia, aromatic	100% 1942	x	.....	.....
Spirit of ammonia, anisated	100% 1942	x	.....	.....
Spirit of ether compound and spirit of ether	100% 1942	x	.....	.....
Suppositories	100% 1942	.....	x	.....
Syrups	100% 1942	.....	x	.....
Tinctures	100% 1942	.....	x	.....
Tincture of iodine	100% 1942	x	.....	x
Vinegars	100% 1942	x	.....	.....
Waters	100% 1942	.....	x	.....
Water, laxative, purgative or medicinal	100% 1942	.....	x	.....

Essential oils, distilled or cold pressed, are included in Schedule III which covers chemicals, household and industrial supplies. Essential oils can be packaged up to 100 per cent. of the amount packaged in 1942, and tinplate closures are allowed.

Ichthyol Stock Siezed

FIFTY per cent. of the stock of the Ichthyol Company, a New Jersey Corporation, Rahway, N. J., has been taken over by the Alien Property Custodian because it was owned by the German firm, Ichthyol Gesellschaft Cordes-Hermanni & Company, a limited partnership of Hamburg. The stock held by the German company was 1,000 shares of the common stock, and 50 shares of $100 par value 7 per cent. cumulative preferred capital stock. Total stock issued by the Ichthyol Company is 2,000 shares of common stock, and 100 shares of preferred stock.

Pricing Drugs and Cosmetics

PRICING of proprietary drugs and cosmetics in the OPA has been moved back where it originally was,—under the direction of Frank Delgado. It will be recalled that some six months ago, power to regulate the prices of proprietary drugs and cosmetics was taken away from Mr. Delgado's division, and a separate division was set up with Robert W. Burns as Acting Chief. Mr. Delgado remained as chief of the division which still controlled the prices of fine chemicals and other drug products, heading division known as the Drugs and Fine Chemicals Section of OPA. Now these two sections have been merged with Mr. Delagdo now being chief of the Drugs, Fine Chemicals and Cosmetics Section of OPA. Mr. Burns remains as a member of the Section.

It appears that the recent discussion before a Congressional committee of the many complicated questionnaires that manufacturers have been required to fill out had something to do with the change. It is said that Mr. Burns' department sent out many of these complicated forms, while Mr. Delgado's department was quite free of this practice.

No More Conventions

THE ODT has urged the cancellation of conventions, trade shows, and sales meetings involving intercity transportation so as to conserve transportation for more essential war purposes. Meetings and conventions which do not contribute in an important way to winning the war are out for the duration.

Because of this request on the part of the ODT, The American Pharmaceutical Manufacturers' Association has cancelled its district meetings of the Sales and Advertising Committee and of the Production Committee of the Association. The Association is planning its regular annual meeting and the reports of these committees will occupy a prominent place on the program of that meeting.

Rubbing Alcohol Cut Further

USE of ethyl alcohol has been further restricted by WPB. The latest amendment to the alcohol restriction order cuts alcohol that can be used for the preparation of rubbing alcohol compounds to fifteen per cent. of the amount used in the base period. The purpose of this is to add force to the provision that rubbing alcohol can only be dispensed on a physician's prescription. Since there will only be fifteen per cent. as much rubbing alcohol compound available as in normal times, druggists will not be able to sell any over the counter, since physicians will want to know how come if the product can not be obtained to fill their prescriptions.

Inventory Control

THE long awaited WPB order establishing control over the inventories of distributors of goods was finally issued December 28, 1942, under the title of Consumers' Goods Inventory Limitation Order L-219. The purpose of the order as explained the administrator of the order, Eaton V. W. Read, is to

"prevent the present situation from becoming worse." What Mr. Read meant by the "present situation" was explained by him with the statement that department store inventories at the end of October, 1942, were 32 per cent. higher than their level of a year before, while inventories of all retail outlets were 16 per cent. higher. The idea of the order is not, in the main, to redistribute goods.

Beginning with the second quarter of their 1943 fiscal year, retailers, wholesalers, and manufacturers' outlets for consumers' goods will have to keep their inventories in the same proportion to projected sales as it was in the average of the three years 1939, 1940, and 1941. WPB officials estimate that approximately 45,000 outlets will be affected, consisting of 25,000 retailers with a total of 35,000 stores, 8,000 wholesalers, and 12,000 wholesale and retail outlets of manufacturers. The order does not apply to merchants with an inventory of cost value of less than $50,000, or with net sales of less than $200,000. No attempt is being made to control inventories on a departmental basis. A continuing study will be made, especially of concerns with $100,000 to $200,000 sales per year with the possibility of the exemptions being lowered if deemed advisable in the public interest.

Food stores are entirely eliminated from the terms of the order as are food products, beverages, and petroleum products, since these will be controlled by rationing. No penalties will be imposed upon stores having excess inventories, but these stores must make monthly reports, and must restrict their receipts of merchandise during the following quarter to the amount needed to establish the permissible inventory at the beginning of the next quarter. In contrast to those whose stocks are within the limits and who may make their permissible purchases at any time during the quarter, they also are ordered to confine their receipts during each month of the quarter to one-third of their allowable receipts for the quarter.

Merchants who come within the scope of the order must compute their stock-sales ratio for the average of the base period for the beginning of each fiscal quarter. Then they must make a computation of prospective sales by adjusting the sales of the corresponding quarter a year earlier according to the percentage of increase or decline experienced during the last previously completed quarter. Finally, they must apply the stock-sales ratio to those prospective sales in order to find their permissible inventory.

Transportation Committee

TRANSPORTATION difficulties in the drug and cosmetic industry were discussed last month at a meeting of a recently appointed WPB Advisory Committee. Members of this committee are L. J. Armstrong, superintendent of Parke, Davis & Company, Detroit; D. C. Birkett, traffic manager of E. R. Squibb & Sons, Brooklyn; Warren B. Legler, assistant treasurer of the Lavoris Company, Minneapolis, Minn.; S. V. Rettino, traffic manager of the Bristol-Myers Company, Hillside, N. J.; Michael Harris, assistant general manager of Max Factor, Inc., Hollywood, Calif.; James McD. Shea, general manager of A. O. Bliss Medical Co., Washington, D. C.; W. L. Veale, traffic manager, Plough, Inc., Memphis, Tenn.; P. F. Williams, traffic manager of the Norwich Pharmacal Company, Norwich, N. Y.; C. S. Schmidt, general traffic manager of the United Drug Company, St. Louis, Mo.; C. A. Willard, government presiding officer. The principal discussion at the meeting had to do with the possibilities of eliminating cross hauling. It does not seem that much elimination of cross-hauling can be effected in this industry since most manufacturers have but one plant in which are made the products in the trade-marks of which they have extremely valuable property rights. Also the very large majority of the plants of this industry are located in the Eastern part of the country.

Paper Box Order

THE use of folding and set-up boxes is restricted by Limitation Order L-239. The order contains no schedule covering this industry but does contain schedules covering food boxes, beverage and tobacco boxes, retail boxes, boxes for paper products, and sporting goods boxes. A special schedule for this industry is understood to be in process and should be issued shortly.

However, the general provisions of the order, which apply to all industries, are as follows:

(1) The use of metal bails or metal handles for boxes, or metal clips or fasteners for boxes customarily known as mailing containers, is forbidden.

(2) The manufacture of any box for seasonal or other special purpose having a greater pulp content or area or weight of paper, or paperboard than contained in the usual commercial box for like containers, and the manufacture of any sleeves or extra containers for seasonal or other special purposes unless also required for the usual commercial box for like contents, is forbidden. EXCEPT, that this restriction shall not apply to boxes in which are packed two or more commodities usually separately packed except to the extent that these restrictions are made applicable to any industry schedule.

(3) The manufacture of any commercial display simulating a package not intended for packaging (dummies), is prohibited.

(4) The use of paper board containing virgin wood pulp is prohibited in a list of various types of paper board. EXCEPT, that this restriction does not apply to boxes manufactured from board in the manufacturer's inventory on Jan. 8, 1943.

(5) The use of virgin wood pulp liners on the inside surface of a box unless such liner is essential in order to deliver the contents in a usable condition, is prohibited, EXCEPT that such liner is in the manufacturer's inventory on January 8, 1943.

Excepted from the terms of the order are boxes completely manufactured or made from work in process prior to the effective date of any of these restrictions or any restriction subsequently laid down in a schedule, *provided* that such work in process must be completed within 90 days after that date.

Also excepted are boxes manufactured to meet specifications for packaging for the Army, Navy, Maritime Commission, War Shipping Administration or Lend Lease.

Cellophane Order Amended

THE Cellophane Limitation Order L-20 has been amended as of January 4. Under the amendment, use of cellophane and similar transparent products is permitted as a replacement for collapsible tubes

in the packaging of tooth paste. Also cellulose caps and bands may be used as a metal replacement for packaging liquid soaps and paste soaps if the cellulose caps or bands serve as a primary closure to a glass, ceramic, or paper top. Disc inner liners of cellulose film may be used also for paper tops to containers for these same products. Under the amendment, no person shall accept delivery of cellophane or similar transparent materials derived from cellulose if the amount accepted, plus the inventory of such materials on hand shall exceed a forty-five day supply, giving due regard to the orders placed with such person and his currant rate and method of operation. This delivery restriction does not apply to acceptance of delivery of fifty pounds or less of cellophane provided the inventory at the time of delivery is fifty pounds or less.

Fats and Oils Order

GENERAL Preference Order M-71, covering fats and oils, was amended as of January 1 to provide:

Manufacture of soaps, exclusive of soaps made from vegetable domestic oil fats or from their fatty acids, is permitted to the extent of 84 per cent. of the base period.

Reports are required as follows:

"Each manufacturer, who in any quarter commencing with the last quarter of 1942, uses or consumes more than 6,000 pounds of fats and oils in the aggregate, shall file with the Bureau of Census, Washington, D. C., each of the following reports in the following manner:

(a) He shall file on or before the 15th day of each month of the succeeding quarter, Form BM 1 showing the consumption of fats and oils during the preceding month.

(b) He shall file on or before the 15th day of the first month of the succeeding quarter, Form BM 2 showing the consumption of fats and oils during the preceding quarter.

Methanol Under Allocation

METHANOL has now been placed under full allocation January 15 under General Preference Order M-31 as amended. It is estimated that there will be a shortage in 1943 of about ten million gallons, excluding methanol from wood distillation, unless the use of methanol for unessential items is curtailed. The increase in demand is caused primarily by the requirements for formaldehyde to produce hexamethylene tetramine, an ingredient in expolsives used by both this nation and the British. It is also caused by increasing demands for methanol to be used in the manufacture of methyl methacrylate resins for military aircraft, and by increasing demands for hexamethylene tetramine for Russia.

Quinine Further Restricted

THE quinine and other cinchona alkaloid order, M-131, has been amended effective January 9 to limit the use of quinine to antimalarials, thus eliminating the permission originally contained in the order which allowed the use of quinine in the manufacture of urea hydrochloride, quinine hydrochloride, and urethane.

F. T. C. and Warnings

THE extent to which the Federal Trade Commission can rightly go in dictating to manufacturers the warnings that they must carry on the labels of their products is the subject of a suit brought by Miles Laboratories. The Commission submitted to Miles a stipulation covering their products, Dr. Miles' Anti-Pain Pills which contain acetanilid, and Dr. Miles Nervine which contains bromides. The stipulation required that Miles include extremely drastic warnings on the labels of these products. Miles decided not to sign the stipulation since it was thought that the Commission does not have jurisdiction to require the cartons, labels, and package inserts to include certain warnings, and further, because it was thought that the Commission does not have the authority, applying to advertising, to require warnings against use and dosage in excess of those which were recommended for the products. Therefore, a Declaratory Judgments suit against the Commission and the individual commissioners has been filed in the District of Columbia.

Mennen Tax Case

MENNEN'S Antiseptic Oil is the subject of a tax dispute. The Commissioner of Internal Revenue classified the product as a toilet preparation and imposed a ten per cent. excise tax on the product. The manufacturer, contending that the preparation was a medicinal preparation, filed suit to recover the taxes. The U. S. Court of Appeals, Third Circuit, decided as follows:

"The statute imposes a tax of ten per cent. of the price for which articles are sold, but in the case of mouth washes, dentifrices, tooth pastes, and toilet soaps the specified rate is five per cent. The plaintiff in this case paid, upon demand, a ten per cent. tax. But we conclude that its product is subject to taxation because it is similar to toilet soap as a 'perfumed cleanser used to loosen and remove dirt from the body.' It seems to us that the tax to be borne by the manufacturer of this product should be no more than that imposed upon the product, particularly mentioned, to which it is found to be similar. If Mennen Antiseptic Oil were taxable as a cosmetic the rate should be 10%, but taxed because it is similar to a toilet soap the rate should be the 5% tax imposed upon the manufacturer of that article. The plaintiff is, therefore, entitled to collect one-half the amount paid upon Mennen Antiseptic Oil for the taxable years in question with such interest as the law gives it."

Therefore, the Court rejected the contention of Mennen that the product was a medicinal preparation, and reversed the ruling of the Treasury Department and the lower court, by stating that the preparation was not a toilet preparation taxable at ten per cent., but was a cleansing preparation, similar to a toilet soap, taxable at five per cent. The Treasury is appealing this last decision to the U. S. Supreme Court.

Allocation for Vitamin C

ASCORBIC Acid, or Vitamin C, is now under full allocation under General Preference Order M-269. This material has been scarce for civilian uses for some time past due to the enormous demands of the Government for supplies for the armed forces, lease-lend, and other requirements. The allocation

order means that the responsibility of dividing up the amount not needed by the Government will be in the hands of the government officials instead of in the hands of the manufacturers.

Essential Oil Scrap

THE essential oil houses of Metropolitan New York have been extremely active in turning over their scrap to the war effort. The committee headed by F. J. Lueders, has assurances from the scrap executives appointed by the various essential oil and aromatic chemical houses that their plants are cleaned of scrap and are being kept that way. No longer are large quantities of scrap being allowed to accumulate as the scrap executives of all the companies are constantly turning the materials over to junk dealers so that it will flow back into production of needed products. A surprising amount of scrap has resulted from the essential oil and aromatic chemical houses of the New York Metropolitan area.

Watch State Legislatures

IN ADDITION to other things that executives in this industry have to worry about, forty-four state legislatures will be in session this year. So manufacturers in this industry will not only have to worry about actions of Congress, the President, and the multitude of bureaucrats in Washington, but they will also have to keep their eyes on forty-four states of the union to see that laws are not passed that will be detrimental to their interests. Following is the list of states whose legislatures are now in session: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, Wyoming.

Manufacturers located in any of these states should plan to keep their eyes on what the legislatures of their states are likely to do with regard to legislation effecting this industry.

After the War

THE Aluminum Company of America has been running a series of advertisements on the subject of "Imagineering," which is the science of thinking now about what uses will be found for our great productive capacity of many materials after peace has arrived. Naturally the company is primarily interested in having people think up uses for the enormous quantities of aluminum that can be produced with the greatly expanded production that the war effort has created.

But the series of advertisements not only apply to aluminum. Recently in fact one of these advertisements was headed "We Have This to Say About Plastics." To quote from this advertisement:

"The more folks get the big idea that the bright hope of industry, postwar, is to do new things new ways . . . the more designers who really get down to cases, the better for all of us. Imagineering is a nationwide must.

"Plastics do many things better than any other material.

"Alcoa Aluminum does many things better than any other material.

"The two can team up to do a better job for you in certain situations than either could alone.

"Of such things will postwar jobs be made. On such things must our 'eighth-day' thinking be concentrated.

U.S.P. Reference Standards

THE U. S. P. Reference Standards Committee has issued a revised list of the reference standards that are now obtainable. These include Cod Liver oil for Vitamin A, Cod Liver Oil for Vitamin D, Ascorbic Acid, Calcium Pantothenate, Cholic Acid, Digitalis, Epinephrine, Ergotoxine Ethanesulfonate, Estrone, Insulin, Menadione, Nicotinic Acid, Ouabain, Posterior Pituitary, Pyridoxine Hydrochloride, Riboflavin, Sulfanilamide, Thiamine Hydrochloride, and Trypsin.

Value of Vitamins

THE value of the use of vitamins has become a popular subject for discussion. From physicians' reports and statements by Dr. Morris Fishbein appearing in the daily papers, one would gather the idea that vitamin preparations are of little or no value. Still there are manufacturers who are giving vitamins to their employees under controlled conditions, and good results are reported.

The latest report indicating the value of vitamins comes from no less a company than E. I. duPont deNemours and Company. Dr. John H. Foulger, director of duPont's Haskell Laboratory of Industrial Toxicology, reports that a more even distribution of food intake, plus extra daily rations of vitamins B_1 and C greatly improved the general health and efficiency of duPont workers and reduced the risk of accidents. Following three years of testing, duPont medical men also observed that extra vitamin C protected workers from heat exhaustion. One of the first experiments to prove this was undertaken in 1939 in a group of thirty men who had to make an extensive repair of a hot air drying duct near the ceiling where temperatures ranged up to 135 degrees. Each of the men took 50 mg. of vitamin C in the morning and 50 mg. at lunch every day. No one suffered from heat prostration, although seven cases occurred during the month among men who did not receive vitamin C and who were working on the floor of the same room where the temperature was 15 degrees cooler.

Talc Order Changed

THE talc order has been amended so that the talc that is frozen for steatite purposes is talc containing not more than 4 per cent of alumina, 1½ per cent of ferric oxide, or 1½ per cent of calcium oxide.

Tin Further Cut

THE tin order has been further amended so that use of tin in shaving cream tubes is prohibited, although blanks containing 1.5 per cent of tin which were in inventory on January 13, may be used. Also manufacturers of tooth paste must use tubes after April 1 which contain 3 per cent of tin instead of 5 per cent, and further, in 1943 they may not pack in tin tubes more than 75 per cent of the amount of tooth paste packed in 1942. Pure tin tubes are no longer to be made for druggists for filling of prescriptions.

WAR CHANGES IN MEDICINALS

By DR. E. C. MERRILL*

It is just a little over one year from Pearl Harbor. Even then there was a definite trend in the tightening of crude drugs and raw materials which has accelerated during the past twelve months to a point where we all realize that curtailment in production of medicinal products becomes a real subject of concern.

Generally speaking, the tightening has broadened not only in the field of crude drugs but in practically every direction, but we will consider only some of those more important materials that have a far reaching effect on the production of medicinal products.

Among the major shortages under limiting orders we have quinine, caffeine, glycerine, sugar, citric acid, alcohol, phenol and its derivatives, toluol and its derivatives, metals of all kinds together with the alloys of same, salts of many of the metals, such as copper, bismuth, arsenic, magnesium, zinc, aluminum and silver, castor beans, castor oil, cocoanut oil, chlorine compounds, cresols, lithium salts, shellac, ammonia, plastics, tin plate, black plate, steel, agar, tannic acid, alcohol ethyl, methyl, butyl, isopropyl, naphthalene, glycols, phenol and its derivatives, formaldehyde, phosphorous, phthalic anhydride, rotenone, pyrethrum, potassium chlorate, potassium perchlorate and potassium permanganate, rubber products, latex, silica gel, steatite talc.

In the face of the above it is apparent that the technical groups in this industry have something to think about in a search for alternate materials.

However, there are additional materials which concern us which may not be listed by the War Production Board as critical to war effort, but rather by actual shortages. Such, for example, may be mentioned in the following list of materials that have developed tightness during the past several months.

*Chief Chemist, United Drug Co.

Acetone
Acetphenetidin
Acid—Acetyl Salicylic
Acid—Ascorbic
Acid Citric
Acid Salicylic
Agar-Agar
Aconite
Alcohol—Ethyl, Methyl, Benzyl, Butyl & Isopropyl
Arnica Flowers
Asafetida
Atropine Sulfate

Belladonna Leaves
Belladonna Root
Benzoin
Bismuth and its Salts
Buckthorn Bark
Buckthorn Berries

Cardamom Seed
Cerelose
Cinnamon
Cloves
Colchicum Seed
Colocynth
Coumarin

Ethyl Vanillin
Eucalyptol

Fennel Seed

Gamboge
Ginger
Gum—Karaya

Henna Leaves
Hyoscine
Hyoscyamus

Jalap

Larkspur Seed
Lethane

Nux Vomica

Oil Cinnamon
Oil Citronella
Oil Cloves
Oil Eucalyptus
Oil Ginger
Oleoresin Capsicum
Orris Root

Papain
Psyllium Seed—Dark
Psyllium Seed—Blonde

Saccharin—Insoluble
Saccharin—Soluble
Saffron
Salol
Sandalwood
Santonin
Silver Protein
Sodium Salicylate
Starch

Tragacanth
Triethanolamine

Vanillin

Wax—Bee's—White
Wax—Bee's—Yellow
Wax—Carnauba

Practically all botanicals of foreign origin

Once again Dr. Merrill brings us up to date on the changes that the war has brought and is likely to bring about in medicinals. This paper was given last month before the Scientific Section of the Proprietary Association.

DR. E. C. MERRILL

The foregoing items are illustrative of the pattern of shortages as they exist today, some items mentioned going through fluctuations in availability as created by numerous influences.

GLYCERIN—M 58

Under restricted delivery, use, and inventory, this material is widely used in medicinals including many of the official products. A trend to the use of alternate materials where practical has been under way over many months. In many instances the partial replacement of glycerine by such sugars as glucose and invert sugar have been successful. Numerous other materials have been considered including glycols and hexahydric alcohols and they in turn have become tight.

ALCOHOL—M3 AND AMENDMENTS

For causes obvious in the anticipated rubber production and the yearly demand for some five hundred million wine gallons as contrasted with a normal of one hundred and twenty million, Conservation Orders in the M Series became the order of the day and the broad influence of such conservation impels reduction in formulation where practicable and a trend in the direction of alternate materials in numerous internal and external medicinal products is now under way.

The restriction of rubbing alcohol compounds for sale only on physician's prescription will undoubtedly conserve alcohol from this class of manufactured products and create a trend to the isopropyl compounds.

In the field of medicinal products for external use especially, there may be an opportunity for the use of wetting agents, solubilizers and emulsificants as a development in the direction of conservation of alcohol.

SUGAR—M 55

Conservation orders in the M Series have had their ultimate influence in creating consideration of alternate materials ranging from excipient materials in tablets to syrups, et cetera, in liquid medications, glucose being one of the most popular considerations in connection with syrup vehicles, with cerelose and lactose in the drys. It is, of course, superfluous to state that the effects of this one order influences a multitude of medicinal products.

CITRIC ACID

While not on published War Production Board Orders, Citric Acid becomes allocated on a 50% basis in medicinal products. The action has undoubtedly raised a grave problem for manufacturers of numerous tablet and liquid preparations that challenges complete and successful solution at this time, since there appears to be no satisfactory material available in sufficient quantity to serve as an alternate material. Consideration is being given to the potential possibilities of the malic, maleic, lactic and gluconic acids, but in the field of effervescent products where tartaric acid is equally short, there exists a problem where alternates are difficult to be found.

PHENOLS AND DERIVATIVES—M 27

M 27 conserves supply and directs distribution and more recently allocates phenol and its derivatives in various channels of consumption. It is not surprising that increasing tightness in this field has occurred, since phenol has been in List I of the Critical Chemicals for nearly a year, and deferment of action toward this important key chemical points to the credit of American Industry in production against a rising tide of demand for plastics and a host of derived medicinal drugs of which aspirin is one of the most important consideration.

Conservation has already taken the practical form of allocation which passes the problem to the manufacturers for further solution and action. Curtailment or

limitation of sizes would appear to be one form of relief and a trend in this direction should eventuate.

ESSENTIAL OILS

Although not covered specifically in War Production Board Orders acute shortages of numerous essential oils exist, among which may be mentioned cassia, clove, lavender, birch tar, eucalyptol, ginger, citronella, bergamot, cardamom, fennel, thyme, coriander and anise.

As a sequel, there is a trend to the use of flavoring oils of domestic origin, as well as the utilization of known active chemical components of certain oils, such as we find in the linalyl esters of oil lavender or cinnamic aldehyde in oil cassia.

Since many of the oils now tight originate from sources on the Mediterranean shores, it seems conceivable that the picture may change rapidly in the event of an upturn of fortune for the Allies.

MENTHOL

Menthol being principally of Japanese origin still remains a short material and impels conservation.

VITAMIN PRODUCTS

In this field notable progress has been accomplished by American manufacturers in (a) increasing production, (b) reducing costs of manufacture of vitamin B_1, riboflavin, viosterol, and ascorbic acid in face of increased usage and demand. A trend in the field of vitamin products in the direction of poly vitamin combinations measured against the yardstick of average daily intake requirements has occurred and in this connection there appears to develop further trends to poly vitamin combinations with essential mineral constituents.

Presentations of such factors as A, B_1, B_2, C, D, niacin and calcium pantothenate has assumed an increasingly popular trend in the form of tablets, as evidenced by the increasing list of national manufacturers and distributors.

Shortage of ascorbic acid at this time seems to be the only one in the vitamin field that is acute.

The Limitation Order L-40 on vitamin A pertaining to limited dosage extended the availability of vitamin A oils and concentrates to a point of easing in this field, although more recently firming tendencies are now reported.

And so we see the role of vitamins with numerous additional factors of unmeasured value for human requirement, broadening in scope and finding new and increasing demand in the present emergency, food enrichment, army rations, and the unpredictable lease lend requirements drawing heavily on the available supplies.

SULFA DRUGS

A broadening in the use of sulfa drugs has been accelerated by military and lease lend demand, and we have also a trend to the rapidly extended use of these drugs, as evidenced in the topical application of sulfanilamide in open wounds and infections. Similarly, the successful results that were obtained in the use of ointment of sulfathiazole have emphasized the importance of these products for external application.

BOTANICAL DRUGS

To the credit of American industry the sponsoring of cultivation of domestically grown botanical drugs represents another trend in this class of medicinals that we hope will be permanent. We have already seen digitalis and ergot of domestic origin replace the imported product, and production of the solanaceous drugs—belladonna, stramonium and hyoscyamus easing a situation that some months ago was decidedly more critical.

Concerning numerous changes that have been made in the standards for official drugs, such as are covered by the U.S.P. and N.F. standards, we have seen during the past year emergency action taken by both the National Formulary and the United States Pharmacopoeial Revision Committees in numerous instances where shortages have compelled these committees to decide either the maintenance of the official status of formulae or the automatic abandonment of same by reason of non-procurability. The importance of continuing action by these committees seems apparent, even to a point of streamlining these groups with authority to expedite important decisions such as are increasingly occurring today. Much credit is due to the Doctors Powers and Cook of the National Formulary and United States Pharmacopoeia for their cooperative effort in considering official changes that became necessary and mandatory by reason of shortages, priority, allocation, lease lend or other causes.

The quinine order is a good example of the far-reaching effect imposed upon both the National Formulary and the United States Pharmacopoeial Revision Committees where changes in the standards and nomenclature of numerous official products became mandatory in both these official compendia simultaneously.

More recently the question of gamboge in official Compound Pills of Mild Mercurous Chloride was the subject of urgent National Formulary action on account of the fact that gamboge was not available and that the Army wanted the official product. The National Formulary Committee decided that a little less "dynamite" in these pills, which are highly medicated anyway, was the proper step to take and so modified the formulation by eliminating gamboge.

And similarly, they decided that cottonseed oil could replace olive oil in formulation of National Formulary products, and that persic oil adopted first by the United States Pharmacopoeia to replace almond oil could be similarly used in National Formulary formulation.

Concurrently have the Pharmacopoeial Revision Committee rendered numerous interim revision, permissive decisions.

The above couples with the change over in the issuance of new revisions of both the National Formulary and the United States Pharmacopoeia during the past year have necessarily imposed upon the technical staffs of numerous manufacturers of medicinals and pharmaceutical products the importance of most active consideration of the revised requirements relating to standards, labeling and packaging.

But aside from physical shortages of numerous raw materials that are a natural sequel to abnormal demand, we have seen develop numerous other factors and considerations all closely tied in with our national economy and the war effort. These influences in many forms must eventually have a profound effect on our manufacturing, merchandising, and distribution policies correlated with the trends that have become increasingly obvious.

Transportation problems emphasize the consideration of elimination of waste in many forms, such as are taking place in the elimination of unnecessary sizes, of the use of unnecessary weight in both packaging and formulation, the demand for elimination of superfluous materials whether they may be in packaging or formulation. Hence, the trend to concentration of medication in compact form.

End product control now raises the question of essentiality of the finished product to the national economy, with the prospect of curtailment or complete eventual elimination of certain items for the duration.

Manpower demand acts as a further lever of pressure on the manufacturers of products that may be ruled as non-essential and thereby creating diversion of manpower as well as impeding transportation.

Allocation becomes a natural consequence of determined essential value and thereby governs production.

Price control and economic stabilization are additional influences that mould the nature of the future policies of the manufacturer.

Whether a manufacturer of medicinals or otherwise, the foregoing influences apply with similar effect to thousands of industries in classes ranging from hypodermic needles to cattle dehorners, from shoe lace tips to locomotives and parts, or from potato sorters and graders to tractors and threshing machines.

CLOSURES AND CONTAINERS

So much for influences and trends created by L & M Orders in the field of crude drugs, and the natural existing shortages, which could be elaborated "ad infinitum," and we turn to the field of closures, containers, paper and finishing materials, which has become a subject of major concern and most intensive research for suitable substitute materials.

Tin, steel, black plate, terneplate, and practically all other metals and their alloys, being tight and restricted, have created a crisis in the field of closures and containers that necessarily calls for the development of numerous non-metallic caps to replace those now made unavailable by War Production Board Orders.

In this field we see the collapsible tube, formerly of pure tin, evolving in many forms ranging from lead-tin alloy to lead-silver alloy, to lead-antimony inside coated with numerous protective coatings adapted to the particular class of product involved. Stimulation in the field of plastics, of extruded plastic materials and impregnated fibrous cellulosic materials, of laminated regenerated cellulosic materials in combination with appropriate binding agents and inside coatings have developed a race for arrival and accomplishment of a practical collapsible tube to replace tin completely. In this field we have seen promising developments that suggest the possibility of an eventual complete changeover in the nature of a non-metallic collapsible container from the once standard pure tin tube.

Similarly in the field of caps, concentration of effort is being made in developing non-metallic caps from numerous non-critical materials ranging from glass, wood, ceramics, cement, thermo-setting plastic combinations, paper, and cellulosic material, and their combinations with appropriate binding agents and processes. Within the limited time that has transpired since the restrictive orders for elimination of metal was issued, American ingenuity became intensely active and so we look to those researchers in this field of development who will, undoubtedly, find an answer to the immediate problem.

Again we see trends and changes from metal to glass in the container field but with glass production limited by the additional demand created by the limiting orders covering the use of metal and tin plate. A search for material other than glass became in order since they required metal caps which in turn are limited. New developments in this field are in process particularly in the direction of utilization of paper, pulp, cellulosic and fibrous materials in combination with numerous binding materials, plasticized resins and polymers including laminations of cellophane and impregnated fibrous products. To the credit of TAPPI, meaning Technical Association of Pulp and Paper Industries, may be mentioned the fact that this Association, comprising several hundred members, have established a policy of pooling of research, of open exchange of technical information among members where such information will contribute materially to the welfare of the industry as a whole and especially where correlated with information developed in the use of impregnating water proofing, grease proofing, and binding agents. Such a policy obviously should expedite contributions to the development of containers of all types for food as well as medicinal products and in the field of abundant raw material.

And so in the field of medicinal and pharmaceutical products, it seems that we are faced with situations that similarly demand the pooling of research and technical information among members in the technical field.

DEODORANTS

By JOSEPH KALISH

DEODORANTS, as distinct from antiperspirants, do not stop the flow of perspiration, but merely reduce its odor, by odor neutralization, by absorption, or by destruction of the odorous compounds. Antiseptic compounds are often present to prevent decomposition of relatively odorless perspiration into malodorous products by bacteria.

Fresh perspiration may be odorless. The characteristic, unpleasant odor of perspiration is directly traceable to the decomposition products that soon form. This odor is due at least in part to the presence of lower molecular weight saturated fatty acids resulting from chemical changes in the original constituents brought about by bacterial action. Amino compounds are also said to be present.

Odors may be covered, absorbed, or destroyed by substances reacting with malodorous fatty acids, and in many cases all of these effects are striven for. The mere covering of perspiration odors by means of perfume is often quite unsatisfactory, the final result sometimes being an odor different from that of the original perspiration but in some respects no less unpleasant. On the other hand, traditional Eau de Cologne has good blending power along with antiseptic value ascribable to its bergamot oil (or substitute) content. Some new perfume ingredients are said to be extremely effective in blending with unpleasant odors to produce complete neutral effects, very small quantities being utilized.

Powder and paste preparations absorb and hold the ill-smelling sweat constituents so firmly that they are no longer objectionable. Lard, petrolatum, hydrogenated oils, and similar fatty materials take up oil-soluble substances, such as the fatty acids, in much the same way that butter absorbs ice-box odors or enfleurage greases absorb natural flower oils. Once the odor has been taken up, other components of the mixture destroy the generating compound and prevent further action. Zinc oxide, forming stable fatty acid salts, and having some antiseptic and astringent value, is a favored neutralizing compound. Precipitated chalk and similar mild alkalies are effective neutralizers. Boric acid, although not a strong antiseptic, is quite effective in deodorants and is widely used in mixtures. Benzoic acid is also active in the form of benzoinated lard or alone.

Absorbent powders will take up odors in the same way as greases, and often hold them with extreme tenacity. Adsorbent carbon is especially notable in this connection although its color of course prevents its application in cosmetic deodorants. Silica gel and active alumina might be used in this connection. Some experiments undertaken with magnesium silicate gave interesting results; this compound was used in a face powder mixture to hold perfume. The perfume was first mixed with the magnesium silicate for later admixture with the rest of the components. Mixing was never done, however, because the perfume oil was so tenaciously held that the powder was virtually odorless. Older materials, such as colloidal clay, infusorial earth, fuller's earth, etc., are quite useful.

Zinc peroxide, sodium perborate, and similar oxygen liberating compounds are very effective in powders, where they tend to destroy the odoriferous compounds after the latter have been taken up by the absorbent. Zinc peroxide especially must not be incorporated in a cream or other preparation containing water since moisture quickly causes complete decomposition and loss of activity.

Powders are relatively easy to prepare and are generally the least effective and popular of deodorant preparations. Using talc, or mixtures containing colloidal clay, precipitated chalk, etc., as the base, zinc

oxide or peroxide, magnesium peroxide, boric acid, small amounts of benzoic acid may be the active ingredients. A certain proportion of zinc or other metallic stearate should be included to promote adhesion.

Talc	20.0	40.0
Zinc oxide	20.0	10.0
Zinc peroxide	5.0	
Boric acid	5.0	25.0
Magnesium carbonate	10.0	
Colloidal clay	40.0	25.0

Mixing should be thorough to make a homogeneous product and the powder must be free from lumps and obvious grittiness. Powders can be readily applied by means of a puff but when otherwise applied may not completely cover the area to be protected.

Pastes are the most common form of non-astringent deodorants and several formulas are given.

Petrolatum	65.0
Boric acid	10.0
Magnesium peroxide	10.0
Zinc oxide	15.0

Hydrogenated oil	20.0
Petrolatum	55.0
Benzoic acid	5.0
Zinc oxide	20.0

Benzoinated lard	90.0
Lanolin	1.0
Benzoic acid	1.5
Zinc oxide	6.5

In all of these products, the whole mixture should be ground in a roller or ointment mill until the paste is completely smooth. A little of a non-obtrusive perfume should also be included in the preparation.

In a few instances, a cream can be made instead of a paste, for presumably greater smoothness and ease of application. In most instances this is merely a needless additional manufacturing complication, since pastes, properly formulated and manufactured, can be just as soft and smooth as creams. In one case, however, the cream is quite desirable. This is in the use of hexamethylene tetramine. This product, made by combining ammonia and formaldehyde, decomposes in the presence of small amounts of acid with the liberation of formaldehyde, the ammonia combining with the acid. Perspiration, slightly acid, acts in this way and the formaldehyde freed in minute quantities serves a dual purpose. It is a very powerful antiseptic and prevents bacterial decomposition of perspiration. At the same time it is a protein coagulant or astringent and stops further flow of perspiration. This latter action, however, is not as complete as that of the active antiperspirants. Since the compound is stable in alkaline or neutral media, it may be easily incorporated into vanishing creams. Its major drawback is the fact that it is responsible for a small but definite number of allergic reactions when used in this way.

Stearic acid	20.0
Hydrogenated oil	2.0
Amino glycol	2.0
Methenamin	3.5
Glycerin	5.0
Water	67.5

This cream is made in the usual way, the hexamethylene tetramine or methanamin being dissolved in the aqueous phase.

Dinner of the Essential Oil Association of the U. S. A., which followed the annual meeting January 8 at the Hotel Warwick, New York.

MUSK

By ALBERT J. DILLINGER*

HISTORICALLY, musk is probably one of the oldest and highest esteemed of all the raw materials used by the perfumer. For centuries it has been held in high veneration by the Chinese, who have attributed to it very wonderful therapeutic activities. Not only in the days of old, but today musk is held to be a cardiac stimulant as well as in cases of collapse due to the Asiatic cholera, nervous afflictions and asthenia. The medical repute for musk was especially spread in those parts of the East which have embraced Mohammedanism. The book "EL-KTAB" calls it "the noblest of all perfumes." In the Korans' description of Paradise, the sacred book of the Mohammedans, the wine drunk by the chosen ones was perfumed with musk. Not only was musk the most popular perfume of the Mohammedan world, but it was the favorite fragrance of the Mohammedan's prophet "Mohammed."

Pao-po-tse, a celebrated physician, recommended it as a sure preventive against snake bites. He also stated that the musk deer fed on reptiles, and that all persons travelling in the mountains should carry a small fragment which kept reptiles away on account of the odor.

Jean Baptiste Tavernier, a French traveler and dealer in precious stones, one of the earliest European travelers who mentions this precious drug, said that in 1638 he bought 7673 pods on one of his journeys, which shows how plentiful it must have been during that early period.

Musk was, no doubt, introduced into Europe by the Arabs since it was found in a list of gifts sent to the Emperor of Rome by Saladin, Sultan of Egypt in 1189, and during the middle ages the most celebrated traveler, Marco Polo, speaks of musk as a common commodity in the East. Due to certain characteristics, peculiarly the musk deer forms a species all by himself in the large ruminant genus. His tail is short, the stump thereof is so deep set in its joint at that first sight it may be thought that this animal is tailless. Besides these peculiarities, the musk deer lacks antlers. In the male, the canine teeth of the upper jaw project from the mouth and cover the lower lip. The secretion is produced in a grandular pouch situated on the hinder part of the abdomen of the males, and its natural use seems to be that of increasing sexual attractiveness, wherein this pouch is deposited the blackish, sometimes tinged with blood liquid, "sui generis," to which the Portuguese at the time of their sway in India and China gave it the name of "mosco" out of which we made "musk." The indigenous tribes adopted with regard to this peculiar product the Chinese designations without insisting that the preference be given to their own names. It is rather difficult to list all the Chinese designations since there are so many dialects in China. In the native Chinese the odorous matter is called "Shay Hiang" signifying "the perfume of the deer," the animal from which it is derived, "Hiang tchang tse." Unlike the stags and the antelopes, wherein it differs in this respect, the musk-deer has no tear pit and his nostrils are separated by a protuberance which has somewhat the shape of a snout. His ears have great nobility and are decidedly pointed. He stands about 20 inches high, and is a little smaller than a roebuck. His movements are graceful, quick, jerky, and exceedingly shy, timid, and runs away at the slightest noise. In his flight, he bounces from one rock to another, and since the fore-legs are shorter than the hind-legs, he falls on his fore-knees and regains his balance on his hind-feet. He skips and capers in a way that cannot quite be imagined unless it has been seen.

Usually well hidden during the day in the dense thickets of birch, rhododendron and juniper, the deer comes out of his hiding at night, and again in the early hours of the morning. Hunters must therefore maintain a complete silence whenever near his quarry as the deer can very easily outstrip any dog in the mountainous country due to its extremely acute sense of hearing and are rarely found in pairs. This animal is so light, so well made for flight, and is moreover provided with

*Perfumer, van Ameringen-Haebler, Inc.

sharp incisor teeth, turning upward and outwards. The incisors are excellent weapons for defense and also splendid instruments said to be used in rooting up aromatic herbs.

Although his head is of grey color comparable to that of slate, his forehead is always black. The white spot which is often found on the brows of the young, disappears as they grow older, and the color of his fur cannot be better described than by this technical expression "strongly rubican." The black hairs and the fawn colored ones are about equal in number, mixed with white, thus the sight of the musk-deer varies in regard to the coloration which depends entirely on how you look at him. The secreting gland is rather peculiar to the male animal. The secretion is contained in a small sac situated immediately in front of the preputial orifice, thus this sac is formed by the invagination of the skin, and produces on its inner surface a number of alveoli, in which the secretion is formed and from which it is discharged into a cavity of the sac. The sac opens by a small canal close to the preputial orifice.

The musk only begins to form with the adult deer, and is being elaborated in the blood. At first, the musk is being poured into the sac in the form of half solid grains moist with a red-blackish humor resembling a blood tinged serum. Under the repeated sweating of the animal these grains are being condensed, transformed into a clotted substance, consistent, friable under the pressure of the fingers, and the more consistent, the more friable, as the sweating, internal and external, is frequent with the deer. This complete consistency, this friability constitutes the perfect state of the musk. Thus the "Hiang" is deposited by infiltration in its receptacle, the liquid part, the "Mi-hiang" as it condenses and as it is renewed in the bottom of the receptacle drives out the "Pan-hiang." The substance, which has become solid, comes out but with difficulty, due to the narrow neck of the bladder like pocket or sac. This follows when the deer is made uncomfortable by the super-abundance of musk that he rubs himself against the trees. This usually occurs especially when the deer is rutting.

They betray their presence not only by their color but by their imprints on the bark which leave a penetrating scent. The air for a considerable space round the animal is permeated with the musk odor, and even the excrement of the animal smells strongly of musk, a fact which assists the hunter materially in picking up the trail. When the hunters have shot a musk-deer the first thing they do is, of course, to take the precious sac of the dead deer and place it to dry. A careful study of the internal structure of the musk-deer can alone bring to light the way in which the musk is being elaborated upon.

Now the esophagus of the musk-deer does not end in the same way, but at its juncture with the rumen, the esophagus is encircled with a muscle which acts as a sphincter, or a muscle that closes an orifice which it surrounds. This sphincter in no way prevents the double function of the ruminant apparatus (i.e. chewing, masticating, and storing food.) Thus, the double function is so highly beneficent to certain animals who are exposed and suffer from scarcity of food, attacks by wild beasts, and by man. Digestion, therefore, proceeds slowly, and, on the other hand, the food once absorbed supplies only with difficulty the matters that can be assimilated by the blood. And, for the same reason, if this extremely shy animal is frightened while the work of digestion is going on, the bolus forces the opening of the sphincter, and is thrown into the first stomach before it has been sufficiently elaborated in the esophagus. From this, it follows that this mass of food tends to disintegrate but imperfectly in the four stomachs, and in this case the particles of food improperly digested enter into the blood circulation in the form of tiny viscous grains which eventually reach the sac or pod afore described and wherein they become concrete.

Doctors, scientists and many naturalists have declared it quite feasible that the musk-deer could be reared in a sort of semi-captivity, and that suitable means can be employed to extract a small quantity of musk annually. The preputial sac containing the musk is accessible, and has a natural opening on the outside through which the musk might be drawn without injury to the animal. Those familiar with the ways of the musk-deer say that the habit of the male deer is to lie down in places exposed to strong sunshine and relax themselves, at which time the condition of the sac opens by itself and thus the musk is exposed. This might be considered further by those in Thibet and Asia interested in the maintenance of the musk-deer.

Commercially, musk is usually sold in pods, although a considerable amount of the so-called "grain musk" is actually sold, yet due to the temptation to adulterate this precious product, most perfumers prefer to purchase the original pod, examining each pod thoroughly to assure themselves of its purity. It is, therefore, preferable that the musk be purchased through reputable houses who handle musk containing the Government seal. Some Chinese merchants buy the product before it is completely dried, then skilfully open the pods and adulterate them by introducing an opening of the neck with various foreign matters such as powdered broiled liver of some animals, iron rust, dried blood, albumen, or roasted beans which are also powdered. These Chinese merchants first empty the pod, then they mix the product of the pod with all these foreign substances and upon completing the mixture, fill the pods again. The Chinese display great ability in this fraud. According to the degree of their honesty, they introduce as much as 25 to 30% of these undesirable ingredients into what they sell as musk pods, thereby making it impossible for another than an expert to detect that the pod has been tampered with. Sometimes, when they cover the pods over again a tera in the skin occurs, but since they are exceedingly clever in patching up the tear with a piece of glued skin, it takes an expert eye to notice it. Moreover, it may always be argued that the tear took place when it was

first in a legitimate way. For as a matter of fact, as soon as a lot of freshly cut pods have been brought in, the pods are immersed in boiling hot water for several minutes so that the bloody membranes adhering thereto may be detached. The sight of a lot of pods when they reach the markets of Tatsien-Lou, Song-Pan, A-Ten-Tze, and Talifou, and when they come out of the yak skin bags wherein a lot may have been enclosed for weeks, gives the impression that the bags contain animal matter in decomposition. This is due to the fermentation which has started and sometimes reached an advance stage during the transportation of the lot in the bags. Hence it is necessary to start at once the cleaning process which we described, and it sometimes occurs that tears cannot be avoided then and there. This provides an excellent pretextor excuse for the Chinese cheaters. The fraud practiced by the hunters in the Thibet region is much more easily discovered. These hunters introduce into the pods such items as stones or pieces of lead, which merely add to the weight but which do not closely mix with the musk, and, therefore, can easily be found and taken out without deterioration to the musk, whereas the adulteration practiced by the Chinese merchants permanently impairs the quality of the musk. The Chinese merchants in general tamper with everything that passes through their hands. Musk which was brought into Shanghai was at one time subject to a heavy tax which was usually paid, and if the merchants were so foolish as to offer adulterated pods, the mandarin or magistrate did not discuss the matter, but promptly ordered the dishonest merchant to be executed, hence this Government musk was sought after as always being of the finest quality.

The musk-deer is hunted with what the Chinese call a Thibetan rifle, which does not carry further than 300 yards. The hunter usually shoots from a kneeling position. Quite often the female deer, although they do not possess the long incisors of the male, are often killed indiscriminately. But the table lands, or the Plateau of Thibet, where these animals live, having an altitude varying from 2000 to 15000 feet, are so vast that there is really no danger of the species becoming extinct very soon. The main hunting grounds comprise the independent parts of Thibet together with Tatsien-Lou, Chengtu, and Sung-Pan. The most important markets in China are principally the Yunam, Yunanese Thibet, Tatsienlu in the Province of Szechuan, with A-Ten-Tze and Talifou as main trading stations. Of all the musks the foremost place is undoubtedly held by Tonquin Musk, coming from Thibet, Szechuan (now known as Sikang), French Indo-China. In Tatsienlou there are a dozen or more Chinese firms who share in the trade. The merchandise is shipped via Chungking to Shanghai where the musk pods are sold for the second time to foreign exporters.

On the opposite slope of the Himalaya Mountains the hunters send the musk to Darjiling, India from where it is then shipped to Calcutta. From Calcutta the merchants ship the musk to Europe and America. It would seem that the production derived from this slope is not as considerable as that coming from the Chinese slope of the Himalaya, where at Tatsienlou alone it is reported that no less than 20,000 pods are annually sold and resold. The caravans of the Thibet periodically bring the musk to the markets of Tatsienlou, since these caravans come by way of Lassa. The distance to be covered from Lassa to Tatsienlou requires three months and it is interesting to note that beside musk, these caravans also carry herbs, gold from the mines of Litang, furs, stags, roebuck horns, and unprepared wool derived from Thibetan sheep. Musk is exported from China in small tin boxes. These boxes are known as "caddies," one caddie usually represents 22 ounces, the name signifying the weight of the musk. Each musk pod is wrapped separately in tin foil or a sort of tissue or rice paper with the usual Government stamp of "China" stamped on each pod. The amount of musk exported from China into the United States varies. The following figures were obtained from the United States Government reports on imports and exports:

1939 5072 ozs. valued at $27,786.00
1940 5728 " " " $61,155.00
1941 11280 " " " $153,381.00 (1st. 9 months)

The principal varieties of musk are as follows: Tonquin, Cabardine, Yunan, Assam and Nepaul.

Tonquin musk is undoubtedly recognized as the most highly valued musk, coming from Thibet, China, where 80 per cent of the world's supply is obtained and exported. The pod is round, slightly flattened, but never pear shaped. A small lappet of skin is left around the edge of the pod so that when this is cut down, and it is only about one-eighth of an inch in breadth, the pod is said to be trimmed. The hairs are brownish-yellow, grayish, or whitish, stiff and short, arranged concentrically around the orifice of the sac. The musk known as "blue skin musk" is ordinary Tonquin musk especially prepared. The two or three layers of skin which cover the opposite side of the sac to that on which the orifice lies are removed, thus exposing the thin membranous skin which lies immediately next to musk grains. The membranous skin is of a bright metallic blue color, somewhat resembling steel, hence the appellation "blue skin." The preparation of this blue skin musk, which is very much prized, is a very delicate operation and is performed by specially trained expert natives in Shanghai.

Cabardine musk is an inferior quality compared to the richness of Tonquin musk, and it is therefore less adulterated. It is principally collected in Northern China, in the Province of Mongolia and Siberia. The pods are of flat oval shape. They are also more hairy and are frequently considerably more moist. In this condition the musk has sometimes not set completely, so that the musk pods contain a yellow liquid which is known as "squeakers."

Yunan musk is obtained in the Chinese province of that name, and may easily be distinguished by its more

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DENTAL SPECIALTIES

By M. A. LESSER

ANYONE who has ever been in a dentist's chair—and who hasn't—is familiar with the array of bottles that form such an imposing part of dental equipment. Some of the bottles are large, most are small because the dentist uses only small quantities of materials. What they lack in bulk, they make up in potency.

The dentist uses a wide variety of substances and drug preparations loom large among his requisites. Like other members of the healing profession he employs many standard, official drugs and chemicals. Moreover, many of the compositions employed in dentistry must be prepared or mixed immediately prior to use because of the very nature of the work being done. However there are numerous combinations that can be prepared for dental use and herein lies a fertile field for the pharmaceutical manufacturer. Such items as antiseptics for both the mouth and dental instruments, styptics and hemostatics, cavity materials, disclosing solutions, polishing agents and the like are but a few of these special preparations that can be prepared ready for use.

Every dentist uses antiseptics. While these must meet the established standards of bactericidal action, they must also fulfill the requisites peculiar to the oral mucosa. For this reason they should be especially free from irritative effect since they are employed on delicate membranes. Penetration, to secure antiseptic action in the folds and intersteces found in and about the teeth, is also a desirable characteristic. Freedom from unpleasant odor and taste may be desirable but not essential properties. As a rule, dental antiseptics for use in the oral cavity are employed in an aqueous vehicle.

Many such preparations are listed in official texts, but often dentists use preparations or modifications of their own. Gross,[1] for example, uses the following solution as an application to the operative area.

Potassium iodide	48 grains
Iodine crystals	84 grains
Oil of wintergreen	24 minims
Glycerine, to make	8 ounces

Where an antiseptic and astringent effect is desired for the treatment of gingivitis, pericementitis, and lacerations, Novak[2] suggests the use of a modification of Talbot's solution, consisting of:

Zinc iodide	3 Gm.
Iodine	5 Gm.
Glycerine	60 cc.
Distilled water, to make	100 cc.

Sterilization of dental instruments is still best achieved by heat in one form or another, but there are times when cold sterilization by means of suitable solutions is required. Many of these cold disinfectants contain formaldehyde or phenyl mercuric nitrate. The latter, according to Schicks,[3] makes an effective germicidal solution in a 1:12,500 concentration, if the instruments are immersed for at least ten minutes. It is comparatively non-toxic in this strength. A formaldehyde-containing solution for instrument sterilization is also suggested by this authority:

Solution of formaldehyde	266 cc.
Sodium borate	30 Gm.
Distilled water, to make	480 cc.

Such solutions, however, have the disadvantage of a disagreeable, penetrating odor, as well as the danger of causing formaldehyde burns on soft tissue. For these and other reasons, it is definitely in order to here repeat Novak's[4] formula for an effective instrument disinfecting solution. This consists of a 2 per cent compound cresol solution and 5 per cent glycerine in a mixture of equal parts of alcohol and water.

Considerable investigative effort has been expended to develop preparations that will produce a local anesthetic effect on topical application to oral mucosa. Intended to prevent the pain of hypodermic injection, for use during gingival curretage and for similar dental operative procedures, several formulas for topical anesthetics, in both liquid and paste form, are available in the literature. Ethyl aminobenzoate (benzocaine, anesthesin) generally forms the chief active ingredient of such products. One standard preparationn of this type[5] consists of:

Ethyl aminobenzoate	6.00 Gm.
Alcohol	44.50 cc.
Oil of cinnamon	0.13 cc.
Liquor amaranth	0.13 cc.
Distilled water, to make	60.00 cc.

A modification of this formula, as given by Freeman,[6] is as follows:

Ethyl aminobenzoate	4 parts
Eugenol	8 parts
Benzylic alcohol, to make	30 parts

A topical anesthetic paste, which like the above preparations also possesses antiseptic properties, was described by Blass:[7]

Benzocaine	10.0 parts
Thymol	0.3 part
Pectin (apple)	0.4 part
Water, to make	30.0 parts

Varying degrees of success have been achieved in the formulation of dentin desensitizers that may be applied directly to the teeth to sooth the discomfort and pain of drilling or other interventive processes. Hartman's solution, which excited so much interest a few years ago,[8] while not as effective as originally believed, is still quite frequently employed by dentists, especially for children's teeth. Although several modifications have been suggested, Hartman's original formula was composed of:

Alcohol	1.00 part by weight
Ether	2.00 parts " "
Thymol	1.25 parts " "

The solution must be hept in a tightly corked amber bottle.

"Accepted Dental Remedies"[9] lists several other preparations for use on dental patients with hypersensitive dentin. One typical preparation consists of:

Ether	15.9 cc.
Alcohol	6.9 cc.
Acetone	7.2 cc.

Styptics and hemostatics find regular and frequent use after extractions and other dental operations. Pressure is generally employed, but is not always effective. To stop bleeding the dentist has a variety of agents at his disposal. Higgins[10] divides these substances into two groups: (a) Those that check hemorrhage by local chemical action, among them being calcium salts, ferric chloride, ferrous subsulfate, fibrin ferments, thromboplastic substances and viper venoms, and (b) Those that check bleeding by pharmacological action (vasoconstriction) including pituitary extract, ergot preparations, ephedrine, synephrin, epinephrin and potassium chloride.

Despite its discoloring proclivities, ferric chloride is quite efficient and frequently employed. A convenient way to apply this substance is in the form of styptic cotton described by Prinz:[11]

Solution of iron chloride	80 parts
Glycerine	16 parts
Water	225 parts
Purified cotton	100 parts

All parts are by weight. Mix the fluids and immerse the cotton, allowing it to remain for one hour. Remove the cotton and press free of excess fluid, spread in thin layers to dry in a warm place protected from dust and light. When dry, transfer to a well-closed amber glass container.

Of course, dentists use a variety of post-operative rinses and many standard formulas are available, many of them being quite simple preparations that are extemporaneously prepared at the time of use. Others must, however, be prepared and ready for use by the patient several times daily. Two such germicidal post-operative rinses are given by Freeman.[12] The second, *Iodine Isotonic Mouth Wash*, was originally developed at the Mellon Institute. Both of these preparations must be diluted before use; one tablespoonful in half a glass of warm water for use four times a day as a mouth wash.

I.	Oxyquinoline sulfate	1.0 part
	Oil of peppermint	1.0 part
	Alcohol	60.0 parts
	Distilled water, to make	100.0 parts

Mix and filter using 2.5 parts of talc.

II.	Iodine	0.4 part
	Potassium iodide	0.8 part
	Sodium chloride	17.0 parts
	Distilled water, to make	125.0 parts

The pain and complications of "dry-socket" are feared by both the dentist and the patient. Many preparations are available for treating this condition, plain glycerine or a mixture of equal parts of glycerine and guaiacol being among the simplest and most often used. Another simple mixture that is standard in dental formularies[5, 6, 9] is the following:

Guaiacol	3 Gm.
Benzocaine	3 Gm.
Balsam Peru	9 Gm.

The official dental text[9] also lists a more complex mixture for dry sockets and for relieving pain:

Benzocaine	1.5 Gm.
Chlorobutanol	1.5 Gm.
Menthol	0.3 Gm.
Oil of Wintergreen	0.3 Gm.
Petrolatum, to make	30.0 Gm.

Various dental investigators have employed sulfonamides as prophylactic agents against dry sockets and other post-intervention complications. De Wolf[13] reported "amazing results" in the prevention of dry sockets and pain by the combined use of sulfonilamide with guaiacol in glycerine. More recently Meacham and Osgood[14] found that the local application of sulfathiazole had proven more effective in the prevention or control of infection in dentistry and oral surgery than any other measure previously employed. They found that by mixing sulfathiazole powder with a water-soluble lubricating base or with pure glycerine, a mixture is obtained which can easily be injected into infected wounds, sockets or incisions without inhibiting the drug's action.

One of the latest suggestions made to prevent dry sockets and similar complications is that of Griffith,

Hirschfelder and Simon.[15] These workers recommended the use of a 5 per cent ointment of paranitrobenzoic acid in hydrous wool fat, to be applied by means of a tube with a nozzle. By the use of this preparation the incidence of dry socket was reduced from five cases in 100 to one case in 176.

In preparing cavities for filling, the dentist uses a variety of highly specialized materials including pulp devitalizers, varnishes, capping compounds and filling materials. Pulp devitalization is a procedure still employed by many dentists, although there is a growing tendency in favor of pulp extirpation under pressure anesthesia. However, since devitalizing preparations are still used, formulas for their preparation should be of interest. Often such pastes are extemporaneously prepared when used, but others come ready-made. One such standard pulp devitalizing paste[16, 17] contains:

Paraformaldehyde	1.00 Gm.
Procaine base	0.30 Gm.
Powdered asbestos	0.50 Gm.
Petrolatum	1.25 Gm.
Carmine	0.02 Gm.

Temporary fillings are usually prepared by the dentist by simply mixing sufficient zinc oxide and eugenol to form a paste. However, there are other more complex combinations used for this purpose. In discussing drugs used in dentistry for children, Easlick[17] recommends the use of an A.D.R. formula as a temporary cement or cavity lining. It consists of two parts, a powder mixture and a liquid mixture, to be combined before use by mixing ten parts of the powder with one part of the liquid:

Powder:	
Zinc oxide	69.0 parts
White rosin	29.3 parts
Zinc stearate	1.0 part
Zinc acetate	0.7 part
Liquid:	
Eugenol	12.75 parts
Olive oil	2.25 parts

A rather interesting tooth filling was the subject of a fairly recent patent.[18] This is a solution for saturating a fibrous filling material such as cotton which became solidified and hard on contact with water. According to the patent the liquid is prepared from:

Gum sandarac	3 lb.
Gum camphor	2 oz.
Methyl salicylate	2 oz.
Thymol	2 oz.
Alcohol	2 qt.

The basic idea of this patent is not new, because to the knowledge of this writer a similarly-acting preparation was on the market some twenty years ago. The preparation then available was sold for self-dentistry or as a temporary filling until sufficient courage could be worked up to visit the dentist.

The last phase of a dental overhauling is a thorough cleansing of the teeth. To facilitate the cleansing job, dentists usually make use of "disclosing solutions" to obtain visible stains upon teeth having mucinous or bacterial plaques. These films and plaques take the stain readily, while the rest of the solution may be washed off clean portions of the teeth. It is then a comparatively easy matter for the dentist to proceed without injury to healthy enamel.

Most of the disclosing solutions depend upon iodine which serves not only to delineate the films but also serves as an antiseptic for the minor injuries to the gums that sometimes occur during a cleaning. One of the oldest and most popular of these preparations is Skinner's disclosing solution.[19] Modified from time to time, the original preparation consists of:

Potassium iodide	15 parts
Iodine crystals	50 parts
Zinc iodide	15 parts
Distilled water	240 parts
Glycerine	240 parts

However, dyes are occasionally used to stain mucinous plaques prior to cleaning. One such, suggested by Easlick,[17] contains:

Bismark brown	0.3 part
Alcohol	10.0 parts
Glycerine	120.0 parts
Oil of anise	sufficient to flavor

Tooth cleaning and polishing combinations used by the dentist are generally based upon the abrasive action of powdered pumice. This may be used in a variety of ways. Often the dentist merely mixes a small amount of the abrasive with water or glycerine in a small dish and goes to work. However, more elegant preparations that are equally or more effective can readily be prepared. One standard dental abrasive paste,[9, 16] with a pleasing taste and blood-disguising color which stays under the brush and does not throw away from the brush or teeth consists of:

Powdered Pumice N.F.	24.0 Gm.
Glycerite of starch	36.0 Gm.
Methyl salicylate	0.5 cc.
Liq. amaranth	1.0 cc.

A polishing paste included among Easlick's[17] formulas for children's dentistry is made from:

Flour of pumice	70.0 Gm.
Borax	30.0 Gm.
Glycerine	75.0 Gm.
Carmine	0.25 Gm.
Oil of spearmint	1.0 drop

Dispensing dental polishing materials in capsules is an added convenience and is a frequently suggested improvement. After the powder is taken from the capsule, all that is necessary is the addition of a few drops of water or glycerine and thorough mixing. A formula[9, 16] for making such capsules is as follows:

Powdered pumice	1.30 Gm.
Powdered starch	0.24 Gm.
Methyl salicylate	0.06 cc.
Carmine	0.005 Gm.

Freeman[20] also gives a somewhat similar formula for making dental abrasive capsules:

Pumice flour, No. 200	20.00 Gm.
Oil of cinnamon	0.25 Gm.
Oil of peppermint	0.25 Gm.
Oil of clove	0.50 Gm.
Powdered starch	4.00 Gm.
Carmine	0.06 Gm.

Many items which the pharmaceutical manufacturer may prepare for the dentist are employed in the field of dental prosthetics. For example, dentists frequently find use for troches (medicated tablets to be dissolved on the tongue) containing local anesthetics to relieve gagging and similar symptoms when taking impressions for making dentures. A standard formula[9] for making twelve such troches, each one to contain one grain of benzocaine, is as follows:

Benzocaine	0.75 Gm.
Vanillin	0.03 Gm.
Sucrose	8.12 Gm.
Powdered tragacanth	0.25 Gm.
Carmine	0.01 Gm.
Water	sufficient

A new denture sometimes causes minor abrasions and irritations in the mouth and on the gums. For this purpose dentists frequently suggest the use of a mixture of equal parts of tincture of benzoin and tincture of myrrh.[9] The benzoin acts as a soothing protective agent, while the myrrh, long used in dental practice, provides an antiseptic action and promotes healing of the abrasions. This preparation is also employed to fix or seal drugs in gingival crevices during treatment of gum affections.[21]

For tooth sensitiveness resulting from the clasps of partial dentures, dentin desensitizers such as those discussed above will often serve to reduce the annoyance and discomfort until the wearer becomes accustomed to his "store teeth."

Denture adhesives are often essential factors in the effective use of these prosthetic products, especially in the early stages of use and adjustment to them. Essentially such denture adhesives consist of natural gums plus a flavoring agent and are employed by sprinkling sparingly on the denture. A standard preparation[9] of this type consists of:

Powdered tragacanth	22.5 Gm.
Powdered gum karaya	7.5 Gm.
Oil of sassafras	0.5 cc.

Gum acacia may be substituted for the tragacanth, and other flavoring agents may be employed if desired.

Other formulas are available. Two denture fixatives of British origin[22] are easy to prepare. One consists of a mixture of equal parts of finely powdered tragacanth and maize starch. The other is made from:

Tragacanth, fine powder	50.0 parts
Gum acacia	44.5 parts
Boric acid	5.0 parts
Vanillin	0.5 part

Cleanliness is highly important for all dentures. Hence denture cleaners enjoy a wide demand. Such preparations fall into two general categories; immersion fluids and preparations to be applied with a brush or similar cleansing aid. The kind of immersion fluid that may be employed often depends upon the type of material from which the denture is fabricated. Thus dentures made with celluloid or cellulose esters should not be cleaned in alkaline solutions, while those made with the phenol-formaldehyde resins withstand most chemical agents. A little trisodium phosphate in water, generally in the proportions of 1:100, is often used as an immersion denture cleaner. Solution of sodium hypochlorite, U.S.P., diluted with water, is also a simple and effective preparation for such usage.[9]

Denture cleaners to be used with special brushes contain substances which act either chemically or physically to assist in the mechanical benefits derived from the brushing. One simple preparation listed in the official "Accepted Dental Remedies"[9] consists of:

Trisodium phosphate	120.0 Gm.
Oil of cinnamon	0.3 Gm.
Liquor amaranth	2.0 Gm.

This is employed by dissolving a scant quarter teaspoonful in a glass of water and is applied with a brush.

Denture brushing powders are often similar to ordinary tooth powders in composition. A suggested formula[23] for making such a powder is as follows:

Finely powdered silica	70 parts
Trisodium phosphate	25 parts
Sodium lauryl sulfate	5 parts

Another denture cleaning powder,[24] said to have been found satisfactory in every way, and to be applied on a damp brush, has the following composition:

Precipitated chalk	4 oz.
Heavy magnesium carbonate	1 oz.
Light magnesium carbonate	½ oz.
Powdered soap	2 dr.

Of course, the patent literature carries its complement of such products. One patent,[25] for example, suggests the use of a solution containing one part of citric acid and five parts of isopropyl alcohol in water for removing mucinous accumulations on dentures. Another denture cleanser, this one from the British patent literature,[26] advocates the use of two parts of sodium peroxide and three parts of sodium chloride, to which other agents may be added.

It is quite evident that the field of dental specialties is indeed broad, and it is hoped that the foregoing has given some idea of the potentialities for serving this profession. Many other special products are used by dentists in the treatment of specific oral infections such as Vincent's angina, gingivitis and the like, but this is a story in itself.

BIBLIOGRAPHY

1. Gross, P. P.: Am. J. Orthodont. & Oral Surg., Oct. 1941, p. 539.
2. Novak, A. J.: Am. J. Orthodont. & Oral Surg., Mar. 1942, p. 156
3. Schicks, G. C.: J.A.Ph.A., Pract. Pharm. Ed. 1:329, 1940.
4. Novak, M. V.: Clin. Med. 48:198, 1941.
5. Schicks, G. C.: J.A.Ph.A., Pract. Pharm. Ed. 1:171, 1940.
6. Freeman, L. G.: Am. Prof. Pharm. 4:19, July 1938.
7. Blass, J. L.: J. Am. Dent. Assoc. 27:445, 1940.

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DOMESTIC DRUGS

By DR. THOMAS LEWIS*

THE progress in domestic cultivation of botanical drugs has been remarkable, yet how much of this activity will be continued after the war is questionable. We believe that most of it will be discontinued. This is not the way we would like it to be in so far as our country's independence is concerned but it is purely a matter of economics and our desire to be independent of foreign sources must be supported by something more than wishful thinking. Without some sort of protection our domestic cultivation cannot possibly compete with foreign sources, except in isolated instances, because our farmers cannot earn their livelihood if they have to sell botanical drug crops at the prices for which the peoples of China, Japan, India and Central Europe are willing to produce these drugs.

During war such observations are of little consequence. There are certain things that have to be done and done quickly, almost regardless of cost. Thus, as before stated, domestic cultivation has made remarkable progress in the last year or two. It has been accomplished through the close cooperation of the manufacturing industry with the botanical drug suppliers. With the ever-present risk of competition from new foreign sources or even the possibility that the war might end before domestic crops can be harvested, it would not be good business judgment for either the botanical drug suppliers or farmers to invest money and time in crops unless they have contracts with the manufacturers for the production. In many instances the total requirements of the industry are only a few tons and any widespread cultivation activity merely results in over-production and lower prices. Also, drug cultivation is costly as compared to other crops because so much hand labor is required. Methods of propagation, gathering and curing must be so developed as to produce standard qualities and protect the active principles of the plants. Only in isolated instances have the standard farm machines been useful.

In order to discuss the cultivation of drugs in detail we must classify into three distinct groups those drugs which can be produced in this country under war-time conditions as we see them today. Bear in mind that almost any botanical drug CAN be cultivated in this country if given sufficient time and propagating material—we have almost every type of soil and climate needed and it is entirely a matter of how badly the drugs are needed and what they are worth in dollar value.

Group 1—Those drugs which are essential to the formulae of manufacturers and for which those manufacturers are willing to contract for cultivation in advance—regardless of market developments by harvest time. This group includes many official drugs which might be classified as non-essential and a greater number of non-official drugs which are essential to the formula of some proprietary medicine or cosmetic. Drugs such as arnica flowers, larkspur, chamomile, dandelion and others fall into this category. Certainly the farmer or importer of botanical drugs cannot assume the responsibility for keeping a manufacturer's product on the market while running the risk of unforseen competition from foreign sources. In order for the manufacturer to protect his product he must contract with the supplier or grower at a price enabling him to produce the material profitably.

Group 2—Those drugs which are vital and absolutely necessary to the health of the civilian population and the armed forces and which must be produced without delay regardless of cost or normal compeitition. Naturally this group will include those few important botanical drugs for which there are no adequate substitutes and which, because of their great importance, we cannot do without. Belladonna, digitalis, hyoscyamus, and stramonium are among the more important and we shall discuss these in greater detail in a few moments.

Group 3—Those drugs which have some long-range possibilities as permanent domestic crops—drugs which can be so greatly improved in quality and yield as to compete with post-war materials of lower quality offered from foreign sources. It may be unfortunate

*S. B. Penick & Co.

that much greater effort along this line has not been made prior to the war. Considerable attention is being given to these drugs now by botanists and plant geneticists in various institutions. S. B. Penick & Company has established numerous fellowships for this purpose. Some progress is being made with a number of important botanicals, although it is yet too early to make any predictions as to the practical application of our findings. Studies with belladonna, hyoscyamus, aconite, colchicum, digitalis, hydrastis and others are under way.

You will be interested in the experience of our organization in the production of belladonna, hyoscyamus and digitalis. During 1941 and 1942 we did a great deal of experimental work in the cultivation of belladonna. In the beginning seeds were extremely scarce and we obtained our original supplies of high test seeds by having them sent over via Atlantic Clipper. These seeds were gathered for us as the result of negotiations by cablegram. They arrived late in 1940 and it was impossible to make much headway with our cultivation work until the following spring. Unfortunately, the weather conditions in 1941 were not favorable for our belladonna crop but we did succeed in getting some material for the manufacturing industry plus a sizable quantity of seed. Meanwhile, the available supply of belladonna was constantly diminishing and it was obvious that organized efforts would be required to avoid a very serious scarcity. After discussing this situation with Washington officials we decided, in 1942, to undertake the cultivation of about 600 acres of belladonna for civilian and military requirements.

Our field staff, which by this time had grown into an imposing unit, immediately formulated plans for this project. Aside from our own data on belladonna cultivation we sought advice and suggestions from every source known to us. Many expert belladonna growers were consulted—hardly any two of whom recommended identical methods. The reason for these differences of opinion was that although each expert had grown belladonna successfully on a small scale they had grown it only *as an experiment* without much concern about expense; each knew how it *could* be grown under ideal conditions but none had ever applied his method to large scale production. Of course, many of these methods were highly impractical for large acreages. Others involved risks that could not be reconciled with the possible advantages to be gained. In brief, it was necessary for our staff to create and follow its own methods and we can say now, in retrospect, that their judgment was excellent. The project for 1942 has been completed and the belladonna situation is well in hand. It is safe to say that there will be no shortage of belladonna for the duration of the war. Of course the costs of this domestic belladonna are much higher than normal import costs, but even so, the market price today is a great deal lower than it was when this cultivation project was begun. The scope of this undertaking may be appreciated when one considers that it required approximately 100,000 sq. ft. of glass-covered cold frames to accommodate the seedlings, approximately 50,000 wood trays or "flats" used in the cold frames, and the transportation of these 50,000 trays an average distance of twenty miles to farms for setting the plants in the fields. The acreage for this project was leased from farmers in selected areas in Ohio, Pennsylvania, Tennessee, Virginia and Wisconsin and our contract terms were such that the majority of landowners were paid for their land rental as soon as the plants were set in the fields, final payment for yield being made upon harvesting of the crop. Some difficulties with insect infestation were encountered in one or two areas and there was some loss of seedlings due to causes normally encountered in greenhouse operations. Withal, the project has been completely successful and we believe that the average yield of our acreage has been higher than anything heretofore reported in commercial production. Some serious difficulty with drying of the leaves was encountered in Pennsylvania but this was overcome by the prompt action of our engineers in erecting a large mechanical dryer at Lancaster, Pennsylvania. Mechanical dryers were used also in the other areas and the crop loss due to improper drying was less than 1%.

According to available records this belladonna project was at least twenty times as large as any other ever attempted in this country. Our organization is now preparing a report to the industry and it will be distributed within the next few weeks.

The domestic production of hyoscyamus is also adequate now for all anticipated requirements. Early in 1941 our organization increased its efforts in the cultivation of hyoscyamus and initiated the gathering and curing of the wild drug. While the quality of the wild material varies considerably we succeeded in selecting the gathering areas so as to procure material exceeding U.S.P. requirements in total alkaloid. This necessitated the establishment of some twenty gathering and drying stations over an area covering parts of three States. We were fortunate in having a field staff experienced in handling such problems and we have every reason to believe that the supply of hyoscyamus will present no serious difficulties for the duration.

Digitalis has, of course, been a domestic drug since the U.S.P. revision of 1936. As you all know, it grows wild in profusion along the Pacific northwest United States. Several manufacturers cultivate digitalis to some extent although the bulk of U. S. requirements are produced from the wild crop. We operate facilities capable of turning out 100 tons or more per annum of material testing high in physiological potency. Since the moisture limit has been reduced to 6% some improvement in dehydration facilities has been required and is being made.

This picture of the domestic situation is by no means complete. We could cite scores of drugs which we are now producing in this country during the emergency. Each has been a problem in itself and has required careful planning and research. Hardly any two of them come from the same region and thus it becomes neces-

sary to go through the process of educating and training gatherers in each area for the production of these wild crops, or to establish complete facilities in each section where drugs are to be cultivated. We doubt that many of these projects will survive after the war but that is a problem also which is being studied with great interest and we shall report to you later.

IMPORTED DRUGS

Import problems continue to become more severe. Shipping space is scarcer. This is even the case where there is no fighting action. General Import Order M-63 issued by the War Production Board in July, virtually limited steamer space to 500 essential items and in this group of 500 only about 48 drug materials in which you, as manufacturers of proprietaries, are vitally interested, appear.

A great many important drugs or botanicals and allied products of great importance *do not appear*, among which, to name a few—and there are others—we list:

Asafoetida, buchu leaves, capsicum, cardamom, colocynth, dandelion, euphorbia, gamboge, kamala, karaya gum, licorice root, myrrh, orris, papain, rhubarb, sandalwood, thyme leaves, uva ursi leaves and valerian root.

With the opening of our offensive against the Axis every available bottom for transportation of troops and supplies means fewer vessels for our importations and of course, that is as it must be.

No organization can remain free of the changes this war necessitates. Ingenuity comes into its highest value under conditions prevalent in the past two or three years. With initial supply areas shut off one by one and even secondary and third quarter channels likewise affected, a serious shortage of many important items will exist today. Our worldwide facilities, connections and experience have been subjected to severe tests but we have delivered. New contributing areas were located; domestic cultivations have been organized and developed; new transportation mediums and new routes are being used.

The location of new supply areas and the promotion of domestic production have cost a great deal in time, labor and expense. In one item alone, on which more will follow later, an original investment of six figures was necessary. We have originated and pioneered in a great deal of this and have opened the way for others to these possibilities for the common good of the nation in its war effort.

Conservation orders from the War Production Board have curtailed many important articles for designated uses only and we have been glad to cooperate in this necessity, not only in making up the necessary reports which were ardious and painstaking, but in turning over the greater part of our stocks voluntarily, in some instances. Among the articles in this group are agar agar, cinchona bark and nut galls.

Listerine tooth powder now appears in wartime dress—a paperboard cylinder laminated with three layers of glassine. The color scheme is blue on white, except for the red wood ball at the top which turns the powder opening.

Musk

(*Continued from page 42*)

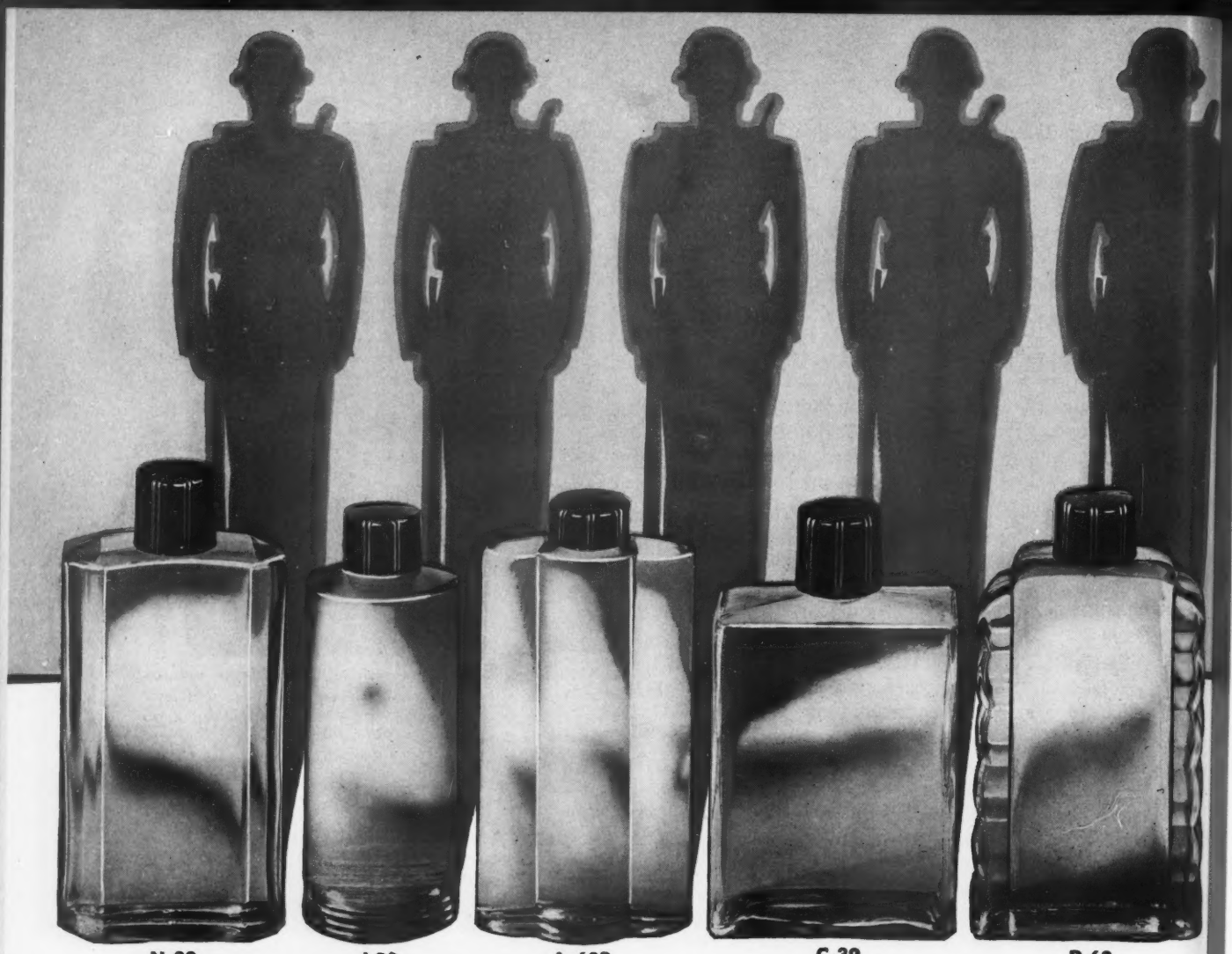
nearly spherical outline compared to the Tonquin. Yunan seems to appear more or less locally and not to any real extent in the consuming markets.

Assam and Nepaul musk. The pods are rather small and about one-third in size of the Tonquin. These pods are hard, round balls, covered with hairs about an inch long. Its grains are exceedingly dry, and due to the care in which it is prepared, it lacks the odor of ammonia. Assam, or Bengal musk, is rarely obtainable and only seen on the London market at more or less irregular intervals. Most of it is being used in the East. Although the Nepaul pods resemble the Assam pods, they can easily be recognized by the much darker skin.

Dental Specialties

(*Continued from page 46*)

8. Hartman, Le R. L.: (through) Drug & Cosm. Ind. 38:255, 1936.
9. Council on Dental Therapeutics: "Accepted Dental Remedies," Chicago, Am. Dent. Assoc. 1939, pp. 255-263.
10. Higgins: J. Am. Dent. Assoc. 27:859, 1940.
11. Prinz, H.: "Dental Formulary," Ed. 5, Philadelphia, Lea & Febiger, 1930.
12. Freeman, L. G.: Am. Prof. Pharm. 4:22, June 1938.
13. De Wolf, R. J.: J. Am. Dent. Assoc. 27:324, 1940.
14. Meacham, P. L. & Osgood, E. E.: J. Am. Dent. Assoc. 28:1640, 1941.
15. Griffith, C. A., Hirschfelder, A. D. & Simon, W. J.: J. Am. Dent. Assoc. 29:49, 1942.
16. Schicks, G. C.: J.A.Ph.A., Pract. Pharm. Ed., 1:199, 1940.
17. Easlick, K.: J. Ontario Dent. Assoc. Feb. 1942, p. 40.
18. Turner, W. G.: U. S. Pat. 2,178,821, Nov. 7, 1939.
19. Prinz, H.: "Iodine Therapy as applied in the Practice of Clinical Dentistry," New York, Iodine Educ. Bur., 1931, p. 41.
20. Freeman, L. G.: Am. Prof. Pharm. 4:25, Aug. 1938.
21. Schicks, G. C.: J.A.Ph.A., Pract. Pharm. Ed. 1:413, 1940.
22. Anon: Manuf. Chem. 10:387, 1939.
23. Anon: Drug & Cosm. Ind. 47:715, 1940.
24. Bennett, H. (Editor): "Chemical Formulary," Vol. I, New York, Chemical Publ. Co., 1934, p. 122.
25. U. S. Pat. 2,201,098.
26. Brit. Pat. 506,451.



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MERCHANDISING NEWS and PACKAGING NOTES

COLOGNES AND THE ALCOHOL LIMITATION: With the alcohol ration for 1943 reduced to 50 per cent there are bound to be many changes in the perfume, cologne, toilet water merchandising picture. Of course, the boys who do a job on perfume, per se, would like to see everybody committed to doing a perfume business which, obviously, would spread the alcohol and bring as good or better a dollar volume, if it was sold. However, this is a big if, for the cologne business for about 10 years or so and ever since the advent of perfumed eau de cologne has been really something. During the bad years, cologne was all that saved the skin of many of the perfume houses and public acceptance and demand for cologne today is something which cannot lightly be disregarded.

Lucien Lelong deserves considerable credit for being the first to merchandise a cream cologne, thus going straight to the heart of the problem with a substitute product. Reports on its acceptance have varied but it had to compete with products made of alcohol and with everybody else promoting an alcohol-made product. Of course, those were the good old days when the alcohol ration was 70 per cent. As the ration goes lower and lower there may be many who will wish that they had thought of it first.

Now that the heat is really on for substitute products there will undoubtedly be many surprising developments in the year to come. Creams and cakes and powders have by this time all appeared as perfume carriers and much interesting work is reported in the field of water solubility.

Another direct approach, a mathematical one, is to cut down the number of sizes marketed and in the case of slow numbers, cut them out completely. Alcohol-containing products may also be cut out of all sets by substituting dry products and thus further spreading the distribution of the colognes and toilet waters.

Of course, there is a large twilight zone in the perfume, toilet water, cologne field which can be exploited. In other words, the manufacturer may introduce what might be called a weak perfume or a strong cologne, something in between his present numbers which would give more perfume and less alcohol than toilet water or cologne but not be an out and out expensive perfume. Steps in this direction have already been taken but so far there is not sufficient basis upon which to judge their acceptance. Like so many other things in this wartime economy, their ultimate fate would seem to depend largely upon what the competition is.

MORE ABOUT WARTIME PACKAGING: Speaking before the American Pharmaceutical Manufacturers, Fred J. Stock, chief of the drugs and cosmetics section, Chemicals Branch, War Production Board, said that "under existing orders on closures, metal is permitted for practically all drug products; however, I definitely feel that it is just a matter of time before metals will not be available for closures, unless it can be definitely proven that a product will spoil if not protected by a metal closure. I would urge all of you to think of substitute closures—some plastics are available and it may be desirable in many cases to go to paper. Some products could perhaps use a glass or ceramic closure. The container orders practically eliminate metal from drug packages, and I feel that within a very short time probably only one or two products such as ether for anesthesia will be packaged in metal.

"I spoke of paper as a substitute closure but by that I did not mean that paper was in free supply. As a matter of fact, there is going to be a very drastic shortage of paper board before many months. We are now studying methods by which packages can be simplified and cartons removed. We feel that you should review all of your packages and eliminate cartons where they are not needed to protect the contents. Grades of paper board should be used that require a minimum of either kraft or sulfite pulp. Some of the elaborate boxes used for soft gelatin capsules might be substituted for by a glass bottle and plastic or paper closure. My recommendation to you is that you go through your entire line and study the elimination of metals, then go through your line and figure out every place that it is possible to save paper board, in order that the paper saved may be used to replace metal."

THE PAPER BOARD SITUATION: Hard on the heels of this warning came a piece from the Office of War Information stating that "conservation of paper board containers, especially those made from virgin pulp was considered at three meetings of the industry advisory committee with the drugs and cosmetics section of the chemicals division of the War Production Board.

"Production of virgin pulp used in some types of paper board for containers is becoming critically short because of a decrease in logging operations caused by a shortage of manpower. Since the supply of virgin pulp is declining while demand for paper to replace metal in drums and containers is increasing, curtailment of less essential uses is becoming necessary."

You will notice that the emphasis, both in this O.W.I. statement and in the statement by Mr. Stock is on the supply of virgin pulp. Now we have it from Robert C. Spencer of the Lowe Paper Co., makers of the type of board used by this industry, that the proportion of sulfite or virgin pulp which is used in boxboard grades is comparatively small. The big consumer of this material is the solid board used to package dairy and other food products.

However, Mr. Spencer adds that "at this time there is a rather strong demand for boxboards both for non-war products, as well as for replacement purposes where tin and other critical substances have previously been used."

Another factor in the paperboard situation is the fact that W.P.B. has also limited production in that field chiefly, it appears, to save transportation, for, according to "Fibre Containers" the paper and paperboard industries are second only to foods in the amount of transportation they use.

There can be no doubt that there is a tremendous wartime demand upon fibre from everything from lipstick containers and paper closures to waterproof food containers and for drums to replace steel drums. There also appears to be little doubt that the W.P.B. is drafting a restrictive order which will apply to all industry, including drugs, but apparently bearing down very severely upon cosmetics. It is also reported that W.P.B. is in a mood to use all of its authority to bear down on those who make unusual commitments in packaging to stock up in anticipation of this order. Of course, this is an industry which works pretty far ahead on packaging and there is no reason to believe that the W.P.B. will question any normal procedure between now and the issuance of the order. But new packages using paperboard will probably come in for close scrutiny so that anyone contemplating any departures might do well to hold them until the text of the order is known.

THE COSMETIC TREND: Sensational, and frequently over publicized statements, by minor officials of Washington Control agencies about present or approaching shortages notwithstanding buyers expect that they will have all the cosmetics in 1943 that they can sell. More of the 20,000,000 women who will be in essential employments next year (6,000,000 of them in war industries) are buying cosmetics today because of occupational needs. It will be hard to convince them that they must go without them. In fact there is nothing that will prevent them from demanding them but their complete abolition.

Retailers realize, of course, that some shortages are real and that curtailment of alcohol, glycerine and other war critical materials must be accepted without complaint in the interest of national defense. They doubt, however, that American women will forego the use of cosmetics just on the score of official bungling or to satisfy some hidden grudge or halfbaked sociological experiment. This may be strong language but it represents the view of a large number of men in the retail trade and expresses the opinion of thousands of women who come to the counters. Women, willing to cooperate, are nevertheless extremely critical of man-made inefficiency and they will make themselves heard where it touches their interest.

This will be the case especially with reference to the many occupational cosmetics which women buy today. These are becoming rapidly best sellers. Dual purpose cosmetics, serving occupational and social needs, are in the ascendancy and they will make up, in the future, a substantial part of counter sales. Counters are prepared to handle this demand and saleswomen are rapidly learning to adjust themselves to the new attitude of their customers.

This may lead to a decline in orders for some items but their list is expected to be small while heavier purchase quotas are foreseen for others, by far the largest numbers. In some places, those little affected by war industry, few changes may be expected from 1942 requirements. In others where war employment is large the swing to occupational cosmetics will be heavy. Manufacturers are able to establish these by looking over the list of cities where the War Manpower Commission has certified the existence of a war critical manpower situation.

Manicure articles seem to be benefiting by this development. Sales will increase and buyers say that they will order more of the larger sizes. The demand for hand beauty preparations is growing and many new items will be added to them before the year is over. There is a drop at the other hand in the variety of shades which, however, is welcomed by buyers because it simplifies their stock assortment problem.

Make-up will run the manicure articles a close second in volume but may come out ahead in value because of the higher prices of most make-up articles and the larger number of individual items that generally are included. The use of make-up foundation aids, powders, pastes, dry sticks and liquid powders is growing and they promise well for 1943.

Hair tonics, hair dressings, shampoos, and creams, the tonics and dressing with little or no alcohol are typical war worker items and their sales are growing.

More toilet goods will be shown by department

stores as most stores are entering into heavy competition for the new business. As stores have their own manpower problem and are hard put to train new personnel, they will be inclined to give preference to well advertised articles which can be sold with a minimum of counter assistance. Many stores contemplate the introduction of self-service counters and the toilet goods section may be the starting point. It gives toilet goods manufacturers something to think about for the future. Self selling labeling and other sales helps, heretofore used only in the five and tens, may become part of the department store sales set up.

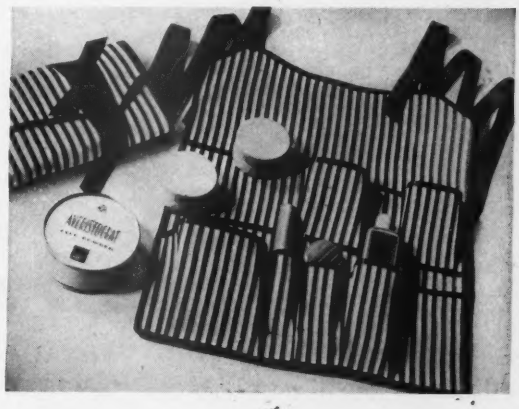
DEODORANT PUFF: Madelaine, Inc., the manufacturers of "Spree" deodorant and antiperspirant, offer an additional product known as "Spree Puff." It contains a special formula deodorant powder, designed for feminine protection, as well as an all-purpose deodorant. Spree Puff is a mit-like puff fashioned of fine materials. The puff idea sounds like a convenient way to use a powder deodorant.

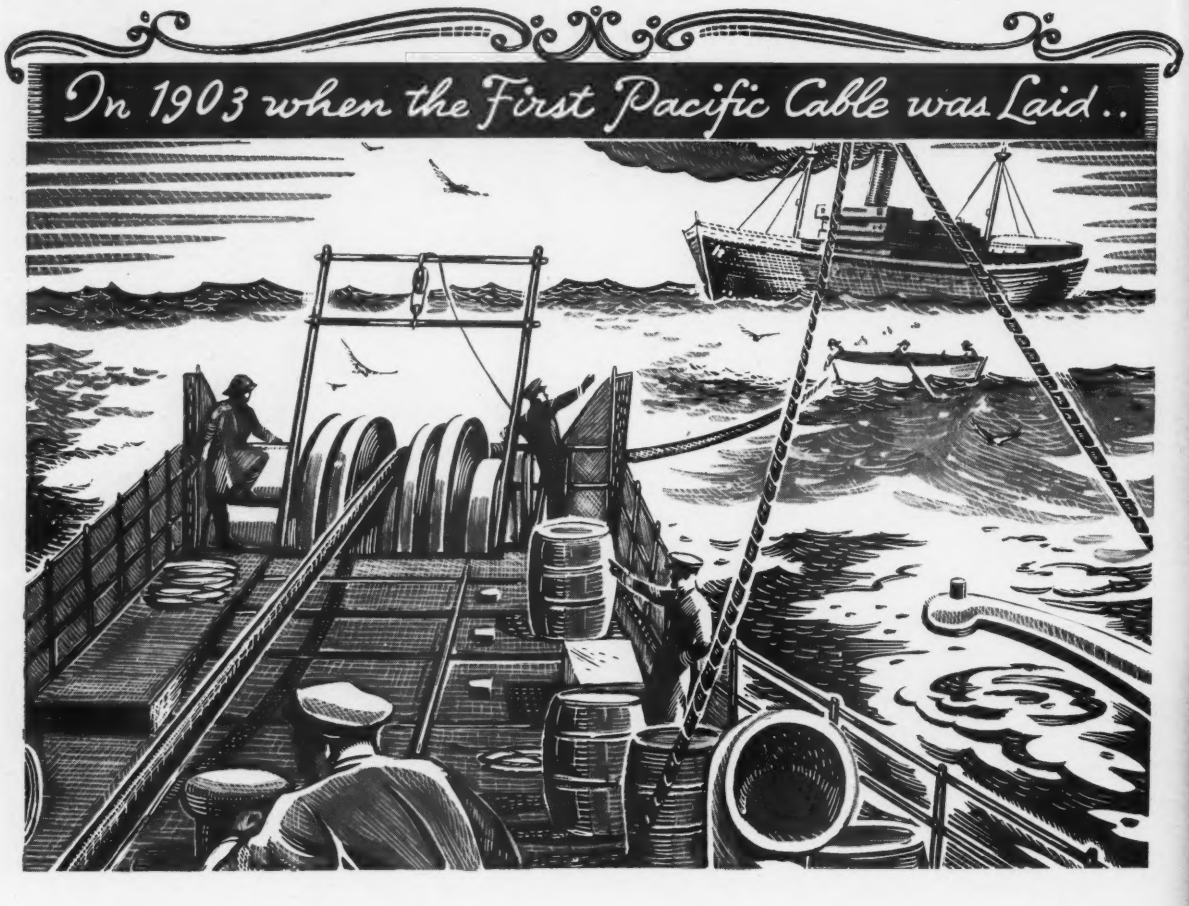
CAKE MAKE-UP: Make-up in cake form continues to play an important part in the cosmetic picture and is now one of the big volume numbers. As we pointed out some time ago, among the first of these to gain and maintain popularity was Max Factor's Pancake make-up introduced several years ago in one size retailing for $1.50. Some years ago Colonial Dames launched an advertising campaign on its Campus make-up. This was smaller and in a lower price bracket than the Factor cake. For a while all was quiet on the cake make-up front until the spring of 1942 when several new ones cropped up. Among them was the Elmo Photo-Finish make-up which retailed at $1.50. Then followed a series in the popular price field including Daggett & Ramsdell Debutante make-up at 50 cents; "Starlet" introduced by the Parfait Powder Puff Co., at 50 cents, and Louis Philippe's Angelus cake make-up at 49 cents.

A more recent addition to the group is Campana Solitair, which is marked in two sizes—a compact with a diameter of 2¾" retailing for 60 cents with a net content of ¼ ounces, and also a smaller size compact with a diameter of 2—3/16", retailing for 25 cents and containing 9/16 ounces. The product in both sizes is available in six shades. The package has been specially devised to meet wartime conditions and involves the use of no critical materials. The compact is an opal glass base with a specially water-proofed cardboard cover.

The possibility that women have had the problem of finding matching shades of face powder and make-up cake, has prompted Jergens to announce a twin make-up consisting of matching shades of new velvet make-up cake with Jergens face powder. The combination package which will make its appearance on the counters on the first of March, will retail at $1.

V-KIT: Harriet Hubbard Ayer has devised the V-Kit, a functional beauty canteen for the day shift, the night shift, victory job in mill, office, at home or traveling. The V-Kit is tailored of denim. Folded it is a flat, compact envelope; opened it becomes a make-up apron which ties around the waist and holds beauty aids at attention, leaving both hands free, while time out is taken to beautify. The V-Kit is fitted with six beauty aids carefully chosen to cover vital beauty





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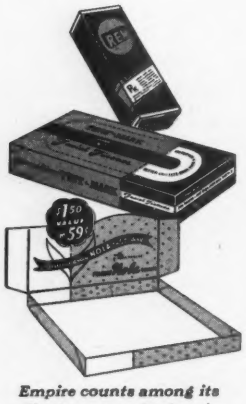


Empire counts among its clients, many leaders in the field.

There's forty years of "know-how" in every *Empire* folding box. Forty years in which *Empire's billions* of folding cartons, boxes and display containers have *helped* to move *billions* of items of merchandise.

In retail stores, in hamlets and cities throughout the United States, goods displayed and packaged in *Empire* boxes stand out from the crowd—*and outsell the crowd!*

Empire may be able to help you in several ways—our modern, excellently located plants may help lower your package costs—our "know-how" may give you a better, more efficient package—our precision printing may add greater eye appeal and greater sales appeal. All these factors can help the success of your product.

Write Empire Box Corporation today —without obligation, of course.

Empire BOX CORPORATION

OFFICES: GARFIELD, N. J., AND PALMOLIVE BUILDING, CHICAGO, ILL.
FACTORIES: GARFIELD, N. J., AND SOUTH BEND, IND. • MILLS: STROUDSBURG, PA.

PARA TI CORP.

An interesting interpretation of the "South American Way" is presented in "Tuya," (For thee alone), a creation of Para Ti Corp. Tuya presentations consist of perfume, powder, and lipstick, packaged in colorful boxes. Tuya is a subtle, alluring fragrance, reflecting the charm and romance of the ladies of South America.

PARA TI CORP.

ALLEN B. WRISLEY

Frille Cologne is a new presentation by Wrisley. Three sparkling bottles of cologne, each with a different design in opal glass, each with a dainty frille and ribbon around the neck. It comes in three fragrances: Apple Blossom, Camelia and Honeysuckle, and in three colors.

ALLEN B. WRISLEY

YARDLEY

Yardley is introducing a new hand cream. This product was orginally created for the women in England who have "war hands." The original formula has been duplicated by Yardley and is being presented to American women who are facing the same problem. Yardley's hand cream protects and lubricates.

YARDLEY

HOUBIGANT

Houbigant announces the introduction of two important additions to its popular Translucid make-up line — Translucid special sheer texture cleansing cream and Translucid special emollient retiring cream.

HOUBIGANT

LENTHERIC

Lentheric introduces a new Spring make-up in a threesome set consisting of the face powder pact (Tweed fragrance), lipstick, and creme rouge. The lipstick case is of a new plastic design with a polka dot motif in gold.

LENTHERIC

PARFUMERIE DE RAYMOND

Parfumerie de Raymond's Mimzy toilet water and cologne come forth in new packages. The polka dotted pink and gray covering with its entwined hearts is typical of all that is soft and feminine in this dainty and delightful fragrance.

PARFUMERIE DE RAYMOND

needs. There is Luxuria cleansing cream; beautifying face cream, which is a powder base; face powder, lipstick and compact rouge. Then, for a refreshing lift to gallant spirits, there is Pink Clover cologne, and the kit also has a couple of empty pockets for hair pins, etc. The price is $4.00 for this smart and functional kit.

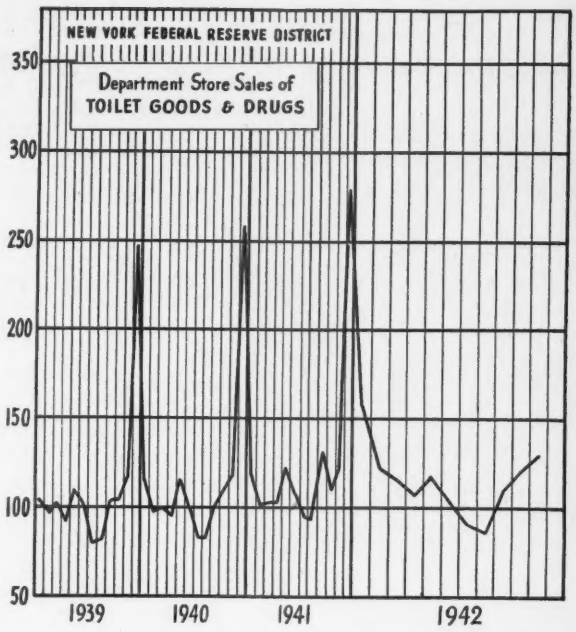
METAL SAVING: McKesson & Robbins has announced that by using paperboard containers for Calox, aspirin and cold tablets the company saves 1,357,000 pounds of tin plate annually used for packaging these three items. Calox alone used 800,000 pounds of metal annually while aspirin and Corax cold tablets took another 500.000 pounds between them.

DOMESTIC CORK: Now that we have both blankets and clothing made from trees, it's easy to believe a report we saw somewhere which said that the bark of the Douglas fir is being used experimentally in place of cork. The bark goes through a grinding process, is treated with water and ammonium hydroxide to give it elasticity and is then pressed into shape. Washington and Oregon are said to be the center of these experiments.

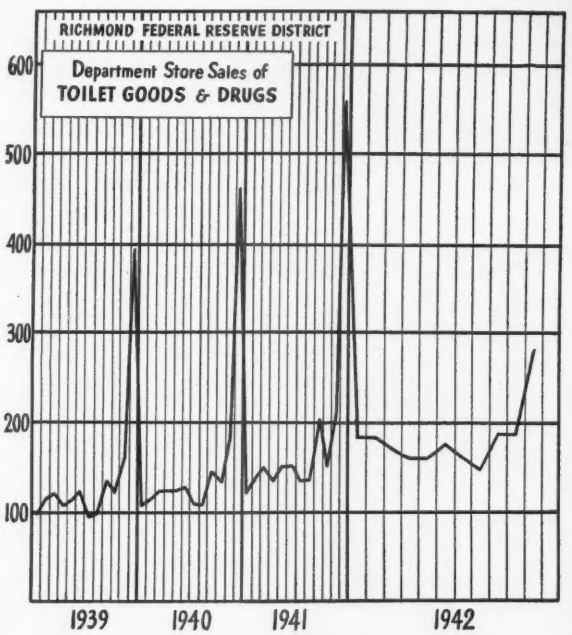
PROTECTIVE COSMETICS: Women workers in Britain's ordnance factories are forced to wear a generous make-up in order to protect their skin from pitting and discoloration caused by some of the chemicals used in making explosives. Doctors order the women to wash three times a day and to apply a heavy make-up after each washing. In order to permit this lavish use of cosmetics in the face of the limitation order on supplies, the government has seen to it that the ordnance plants are furnished with large amounts of the necessary cosmetics. Not only must the women workers apply fresh make-up three times a day but they must also stand inspection to make certain that they have applied the make-up generously enough.

This, of course, is an extreme example but there can be no question of the increased demand for protective creams and lotions in this country since women began to go into the industrial plants in large numbers.

NEW FORMULA: After all these years of soup making, Campbell has finally produced new formula soups and, not to be outdone, Colgate, also one of the country's pioneer businesses, announces that Colgate dental cream, "largest selling dental cream in the world," is now made from a new tested improved formula. "Characteristics of the new product are: a new, more refreshing flavor; a more active penetrating foam; a more attractive appearance; and a new, more effective polishing agent."



Sales of toilet articles and drug sundries by department stores in the New York Federal Reserve District were 6 per cent. greater in November 1942 than in the same month of 1941. This corresponds to unadjusted index numbers of 130.0 for November 1942, 120.7 for October 1942, and 122.6 for November 1941.



Sales of toilet articles and drug sundries by department stores in the Richmond Federal Reserve District were 34 per cent. greater in November 1942 than in the same month of 1941. This corresponds to unadjusted index numbers of 280.7 for November 1942, 187.1 for October 1942, and 209.5 for November 1941.

What the Pueblos found out about packaging

THE early Pueblo Indians of our great Southwest were the original cliff dwellers. They solved their "packaging problem" by living up in the air.

Pueblo cliff dwellings hugged the sheer cliff sides, backed up against towering walls. Enemies couldn't attack from the rear—the back of the house was protected. So was the front of the cliff dwelling, because the only access was up the cliff side, where the Pueblos could keep close watch.

But this double protection from human enemies was not all the Pueblos did. They found out that their "package," exposed as it was to the sun, wind, and rain, needed still more protection. So they covered their cliff dwellings with a mixture of burned gypsum, to protect them from erosion. That's how they improved their "package," and made it a real success.

Improving packages is an important part of Continental's service. We know that packages which are sturdy, good-looking, and specifically designed to do a job, help to make the sales curve zoom. That's why Continental has become known as packaging headquarters for industry.

Today, millions of cans for America's civilian food supplies, for Army, Navy rations, for beleaguered nations, are rolling out of Continental plants. So are other vital things for Uncle Sam's needs. All are packages to protect America!

Looking into the future we see many new packages—ideas which must be held until another day. But, for those who are planning ahead, we offer the services of our packaging engineers, research men and designers. They will be glad to work with you.

What will be the PACKAGE of the FUTURE?

The package of the future will be the package that best meets *all* these 10 important points:

1. Protects against light, heat, and dirt.
2. Does not chip, break, or tear.
3. Is adaptable to *highest* speed filling operations.
4. Is economical to pack, ship, and handle.
5. Light weight, compact, no waste space.
6. Moisture and vapor proof, impervious to temperature changes.
7. Easy and convenient to display, sell.
8. Available in wide variety of sizes, shapes, styles (over 500).
9. Offers maximum convenience and safety in consumer usage.
10. Permits high processing temperatures, certain hermetic sealing.

These points made the metal container *first* in packaging. If there ever is another package that has *all* these qualifications, we'll be making it!

CONTINENTAL CAN COMPANY

Packaging Headquarters for Industry

Lilas SURFINE

STILL THE FINEST!

Lilas Surfine has, for many years, been recognized as an outstanding perfume—the most perfect reproduction of the Lilac note.

Compare it with any other fine Lilac flower oil. Then you will understand why it is being used in so many quality perfume and cosmetic lines today.

Fortunately, Lilas Surfine is as readily available and as economical as in the past because it is based on American-made materials. By all means try it in your own perfume or cosmetic line without delay. We are sure it will pre-eminently meet your most exacting requirements.

Priced at $16.00 per pound

WRITE FOR A SAMPLE NOW!

FELTON

CHEMICAL COMPANY, INC.

599 Johnson Avenue
Brooklyn, N. Y.

BRANCHES IN PRINCIPAL CITIES

Manufacturers of Aromatic Chemicals, Essential Oils, Perfumes and Flavors.

FELTON Quality

NEWS

Companies

Upjohn Appoints Sales Managers

Emil H. Schellack and C. V. Patterson have been appointed general sales managers of the Upjohn Co. They take over the work formerly handled by the office of the late Malcolm Galbraith, director of sales.

Mr. Shellack and Mr. Patterson, both of whom have been with Upjohn for many years, will share the responsibilities of their new office and decisions of policy will be made by consultation. The sales territory has been divided between them, certain branches to each.

Knox Ide in New Capacity

Knox Ide, vice-president, general counsel, and secretary of American Home Products Corp., has been elected to the newly created position of executive vice-president, according to an announcement by Alvin G. Brush, chairman of the board.

Dr. Engels Heads Merck Club

The Merck Quarter Century Club, numbering 166 members who have been in the employ of the company for more than twenty-five years, held its fourth annual dinner at the Elks clubhouse, Elizabeth, N. J. The club was organized in 1939 by George W. Merck, president of Merck & Co., Inc., with 128 members. Of the present membership, fifteen are women.

The retiring president of the club, James J. Kerrigan, opened the meeting. The principal address was made by Mr. Merck. Representatives were present from the Philadelphia and St. Louis plants.

The following officers were elected for 1943: president, Dr. W. H. Engels, associate director of research and development; vice-president, S. W. Walker; secretary and treasurer, Mrs. Charlotte Schubert. R. J. Strong was elected chairman of the executive committee.

Lohrberg Now Director of Sales

E. Hugh Long, vice-president in charge of sales, Sharp & Dohme, has announced the appointment of R. O. Lohrberg, who has been assistant sales director of Sharp & Dohme, as director of sales. Mr. Lohrberg joined the sales division sixteen years ago as a territorial representative.

A native of Red Bud, Illinois, Mr. Lohrberg attended St. Louis College of Pharmacy and began his career as a licensed pharmacist at Lincoln, Neb. He was later employed by the Unitt-Docekal Drug Co., Omaha, where he remained for seven years. In 1926 he entered the service of the H. K. Mulford Co. as a salesman covering a territory embracing counties in both Nebraska and Iowa. In 1933 he was made sales manager of the Kansas City district and a year later the St. Louis district was annexed to his charge. In 1936 he went to Philadelphia as western sales manager of Sharp & Dohme, directing operations in all territories west of the Mississippi, including Hawaii and Alaska. Mr. Lohrberg became assistant sales director in 1936.

Alexander Joins Sonneborn

Charles F. Alexander, who has been associated with Seldner & Enequist, Inc., Brooklyn, for the past ten years, has joined L. Sonneborn & Sons, Inc., where he will have the northern New Jersey and New York State territory.

Mr. Alexander served last year as chairman of the entertainment committee of the Salesmen's Association of the American Chemical Industry and during 1943 will act as secretary of the association.

Schimmel Appoints Eickmeyer

Schimmel & Co., Inc., has announced the appointment of Henry H. Eickmeyer as special sales representative in New York.

National Drug Names Dr. Meeker

National Drug Co., Philadelphia, has announced the appointment of D. Olan Meeker as medical director. Dr. Meeker is known in the medical field for his original research, particularly in the field of biological chemistry, and is former head of the research department

D. OLAN MEEKER

of Murray Breese Associates, New York medical advertising agency.

Dr. Meeker started his technical career as a graduate in chemical engineering, later studying medicine at the University of Rochester, where he received his degree. Following three years of interneship in medicine and surgery, he established offices in New York where he has been engaged in general practice for the past ten years.

John F. Queeny Plant

In honor of the founder and first president of Monsanto Chemical Co., the St. Louis plant of the organic chemicals division of the company will henceforth be known as the John F. Queeny plant.

The John F. Queeny plant is on the site of the company's original plant which was started in St. Louis in 1901 by Mr. Queeny to manufacture saccharin. It is now making over one hundred chemical products—chiefly organic intermediates, fine chemicals and pharmaceuticals.

GUM KARAYA TRAGACANTH ARABIC LOCUST

ORBIS GUMS, whole or powdered, are the products of expert experience of forty-three years standing in the selection of fine raw materials and in milling to guarantee complete satisfaction for your most exacting technical requirements.

ORBIS GUMS can be obtained in any mesh from the finest powder to the various granular forms used to a great extent in the drug field—ground in our modern mill at Newark, New Jersey.

ORBIS KARAYA GUM in fine powdered form is specially adaptable for "Wave Sets."

Please let us know your requirements. Working samples upon request.

ORBIS

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89 Broad Street

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1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

Abbott Gives Service Pins

Service pins were awarded December 29 to every employee of Abbott Laboratories, North Chicago, Ill., who had been with the company for five years or more. Nearly 900 men and women were presented with gold pins in ceremonies held in the gymnasium of the high school at Waukegan, Ill.

Presentations were made by E. H. Ravenscroft, chairman of the board of Abbott Laboratories; S. DeWitt Clough, president; R. M. Cain, executive vice-president; and James F. Stiles, Jr., vice-president and treasurer. Other officers also addressed the group.

S. DeWitt Clough, President, Abbott Laboratories, presents Abbott Service Emblem to F. K. Thayer. *Background:* R. M. Cain, Executive Vice-President, pins his 25-year emblem to lapel.

The emblem has a chevron for each five years' service. A special pin denoting 25 or more years with the company is studded with a small diamond. Thirty-nine employees received the diamond emblem, including President Clough and E. L. Drach, director of purchases, both of whom have been with Abbott for 38 years. In the 20-year bracket, 51 employees received the emblems bearing four chevrons; 101 received the 15-year pin, 141 the 10-year pin and 533 the 5-year award. Similar presentations were made to Abbott branch employees throughout the United States.

Bonuses totalling more than $48,000 were distributed among Abbott employees at Christmas time.

Cox With Lederle

H. R. Cox has joined the staff of Lederle Laboratories, Pearl River, N. Y., where he will be associate director of research in charge of virus and rickettsial diseases. Dr. Cox was formerly head bacteriologist of the U. S. Public Health Service, Rocky Mountain Laboratory.

Illium With Arvey

H. C. Illium, formerly advertising manager of Container Corp. of America, has joined Arvey Corporation, Chicago.

H. C. ILLIUM

Mr. Illium will be in charge of a new department that will develop replacements for metal and other critical materials, for government and civilian requirements.

Join 20-Year Club

M. Stanley Barker, *metropolitan New York sales manager* for Magnus, Mabee & Reynard, Inc., and Miss Maryanne James, *assistant to the treasurer*, were inducted into MM&R's 20 Year Club, December 2 at the Hotel Warwick, New York. Nine active members of the 20 Year Club and one retired member, Edgar A. Lessels, were present. William F. Fischer, general sales manager, presided since he is the oldest active MM&R employee in terms of service.

Felton Expands Plant

Felton Chemical Co., Inc. has purchased a sizeable piece of property adjacent to its plant in Brooklyn, N. Y. The additional space is needed to accommodate the greatly increased volume of business handled by the concern.

The new property has a frontage on Johnson Ave. of 125 feet and is 200 feet deep. There are several brick and concrete buildings which are being used for manufacturing purposes and a large yard for the storage of materials in drums.

New Ebrey Plant

F. I. Carreras, president of Ebrey Chemical Works, has announced that the company has established new laboratories and plant at 337 S. W. North River Drive, Miami, Fla., to enable the company to attend to its domestic business and shipping its medicinal preparations to Latin America.

When the plant is in full operation the company will start an educational program to the medical profession, wholesale druggists, hospitals and dispensaries, setting forth the value of its new diuretic discovery. The product which is based on the castor oil plant is said to be a pure natural vegetable compound, liquid, free of objectionable characteristics and an economical substitute for all known organic diuretics. This new therapeutic preparation is called "Anticaluculina."

P. E. Haebler Joins Goldschmidt

Philip E. Haebler is joining the Goldschmidt Chemical Corporation of New York as Vice President. He has resigned from van Ameringen-Haebler Inc.

PHILIP E. HAEBLER

Mr. Haebler is a member of the Toilet Goods Association Convention Committee.

Ettershank With McK & R.

William C. Ettershank, with McKesson & Robbins since 1930, has been appointed vice-president in charge of the company's tax division. In announcing the appointment, W. J. Murray, Jr., president, stated that the multiplicity of taxes affecting the business had made their servicing a major phase of business operations.

Before joining McKesson & Robbins Mr. Ettershank was with the American Chain Co., Bridgeport, Conn., for seventeen years, where he was in charge of accounting and taxes.

Felton Sales Meeting

Felton Chemical Co., Brooklyn, N. Y., held a sales convention in New York which was attended by Robert Felton. Los Angeles, manager of the western division; Murray Harstein, Chicago, manager of the mid-western division; Hans Drasel, manager of the Philadelphia branch; and William Zuckerman, Boston, manager of Felton's New England division.

Sterling Drug Becomes Operating Company

Sixteen wholly-owned domestic subsidiaries were absorbed December 31 when Sterling Drug Inc. became an operating company.

James J. Hill, Jr., president, announced that the corporate change would leave entirely undisturbed the company's sales policies, trade-marks and advertising programs but that the Sterling name will appear for the first time on packages containing many of the company's popular drug products.

HAROLD B. THOMAS

OTTO W. ERGENZINGER

Three new vice-presidents were elected: Harvey M. Manss, president of The Bayer Co., Inc.; Otto W. Ergenzinger, president of The Chas. H. Phillips Chemical Co.; and Harold B. Thomas, president of The Centaur Co. E. I. McClintock is already a vice-president of Sterling Drug Inc. In addition, he is president of Sterling Products International, Inc., and chairman of the board of The Sydney Ross Co., wholly-owned subsidiaries not included in the corporate reorganization.

In place of the 16 subsidiaries, the following new divisions within the company have been formed: Bayer Co. Division, Centaur Co. Division, Cummer Products Co. Division, Chas. H. Phillips Chemical Co. Division and the R. L. Watkins Co. Division.

The following subsidiaries are now combined with the parent company: The Ayer Co. Inc. of Massachusetts; The Bayer Co., Inc. of New York; the Bayer Co., Inc. of California; Dr. W. B. Caldwell, Inc., of Illinois; California Fig Syrup Co. of California; The Centaur Co. of New York; The Cummer Products Co. of Ohio; The Delatone Co., Inc. of Illinois; The Ironized Yeast Co. Inc., of Delaware; The Knowlton Dandcrine Co. of Illinois; The Molle Co. of Ohio; The Chas. H. Phillips Chemical Co. of Connecticut; Proprietary Agencies, Inc. of Delaware; Sterling Drug Inc. of West Virginia; Synthetic Patents Co. Inc. of New York; The R. L. Watkins Co. of Ohio.

Unaffected by the corporate reorganization are the company's wholly-owned subsidiaries in Canada, England, Australia, South Africa and Latin America.

Tysdal Joins WPB

Elmer B. Tysdal, production manager of Goldschmidt Chemical Co., New York, is now with the Drug and Cosmetics Section of the Chemicals Division of the War Production Board. Mr. Tysdal's work will be with cosmetics and he succeeds Dan Dahle who has returned to the Food and Drug Administration and A. B. Pacini, who has returned to American Home Products Co. Mr. Tysdal has been supervisor of Goldschmidt's production since July 1935 at which time he came from Chicago to assume these duties.

Banks Now Vice-President

Reginald M. Banks, who has served as assistant to the president of American Cyanamid Co. since 1940, has been elected a vice-president of the company. He has been associated with American Cyanamid since 1928.

Revlon Sales Meeting

Revlon Products Corp. held its annual sales meeting in New York December 28 to 31. Frazer V. Sinclair, of THE DRUG AND COSMETIC INDUSTRY and "Beauty Fashion," was one of the speakers at a luncheon held at the Waldorf-Astoria, December 28. The meeting was also addressed by Adam Gimbel, president of Saks-Fifth Avenue, Martin Revson, general sales manager of Revlon, Charles Revson, Revlon president, and Abbott Kimball, president of Abbott Kimball Advertising Agency.

Revlon Sales Meeting. In center is Adam Gimbel; to the left of him is Martin Revson, general sales manager. To the right of Mr. Gimbel are: Charles Revson, Frazer V. Sinclair, of DRUG & COSMETIC INDUSTRY, and Pauline Foster, assistant sales manager retail division.

Measured Purity

Men and methods to a large degree determine skill in manufacturing Fine Chemicals.

Baker's constant flow of purity by the ton is the result of unique control methods and ceaseless testing. It's never hit or miss. It's always Measured Purity—purity to predetermined and exacting standards.

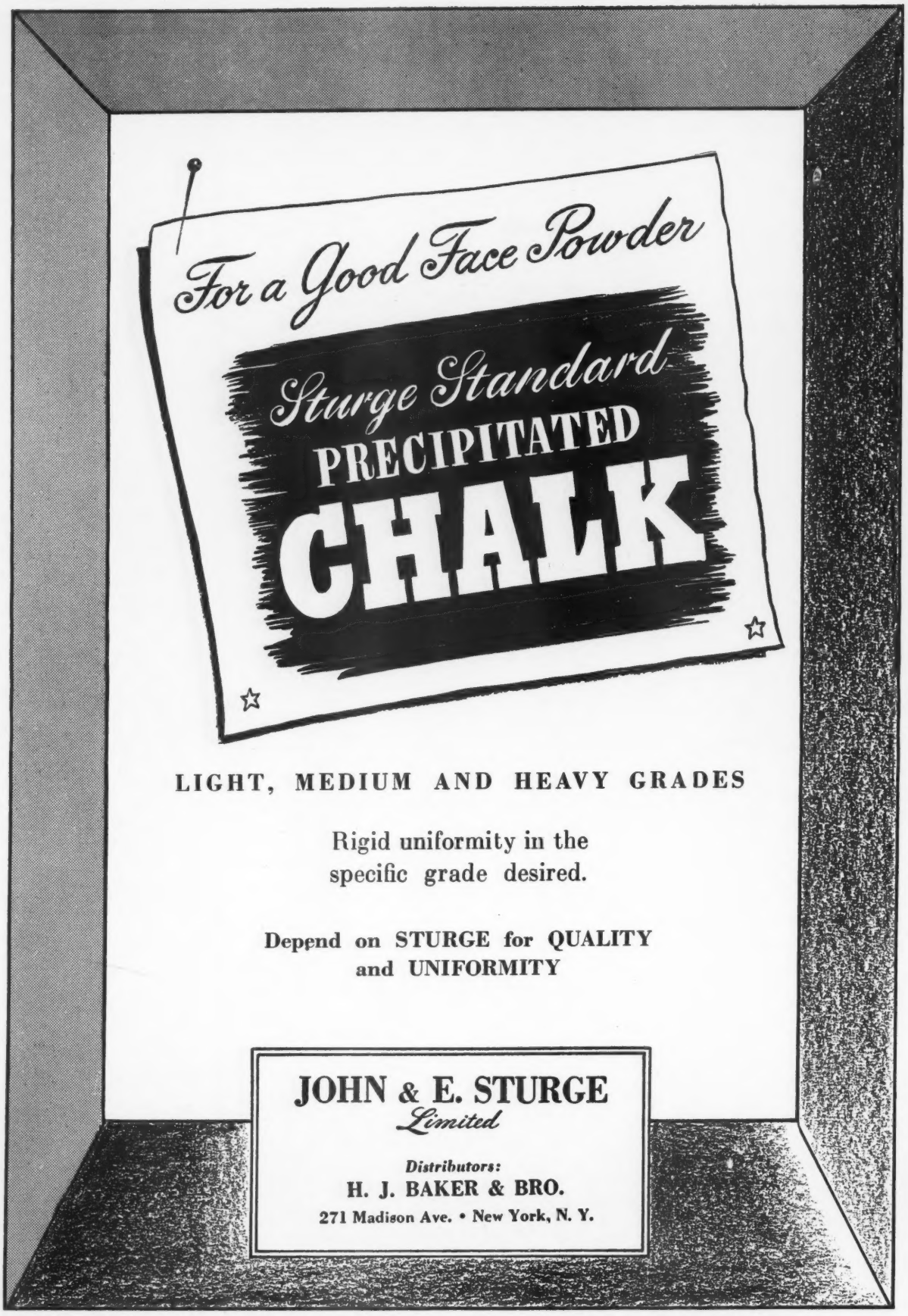
These control methods are very similar to those used in the manufacture of Baker's famous C. P. Analyzed Reagents, chosen for their exceptional purity by the nation's foremost research chemists. The men who use these methods to manufacture Baker's Fine Chemicals grew up in the atmosphere of defining purity to the decimal. Baker's fundamental principle—"There shall be no compromise with quality"—never gives way to short cuts.

Leading pharmaceutical manufacturers appreciate this Baker principle. And in war-time, as new and enlarged demands are placed upon the industry—more and more Fine Chemicals are bought from Baker.

Should you need Fine Chemicals, or face a fine chemicals problem that requires exacting Measured Purity, write us. Perhaps we can help you, too!

J. T. Baker Chemical Co., ***Executive Offices and Plant:*** **Phillipsburg, N. J.** ***Branch Offices: New York, Philadelphia and Chicago.***

Baker's fine chemicals



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WHY HEALTH STANDS HIGH ON BOTH THE VITAL FRONTS

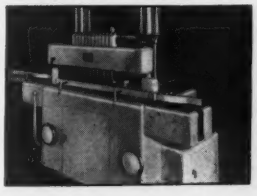
IT TAKES the best in heart and bone and muscle to build ships, and to man them, for war. You've got to keep a man fueled up to work like that. Especially today, with the terrific pace and pressure to build ships faster, FASTER.

On both the production and fighting fronts, nourishing foods properly packaged and bottled by Pneumatic Machines, are doing a tremendous job in keeping our men fed and fit. In every industry where foods are packaged — and medicines, too — Pneumatic equipment is turning out the goods with unrivaled speed and exactness. And those are two of the victory assets of the ordnance equipment that Pneumatic is largely engaged in producing today to help meet the emergency.

If right now you're working on a war production problem that involves the packaging of such products as dehydrated foods, powdered eggs, army field rations, medicinal supplies, and other essential items — you'll find Pneumatic prepared as always to give you sound advice and reliable guidance. In war as in peace, it is still to your advantage to consult Pneumatic first. PNEUMATIC SCALE CORPORATION, LTD., 70 Newport Avenue, North Quincy, Mass. New York · Chicago · San Francisco · Los Angeles ·

PNEUMATIC
PACKAGING & BOTTLING MACHINERY

This Pneumatic Automatic Samco Filler handles bottles, jars, or cans



Fresh and exhilarating as the flower itself—WARDIA—an entirely synthetic Rose character, is meeting the most exacting demands of discriminating perfumers. Used by itself or as a replacement for the natural Rose oil it is invaluable. A Chuit, Naef product, ample stocks are available in this country—$58.00 per pound—a trial ounce $3.75.

Firmenich + Co.

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J. B. Magnus Addresses Sales Meeting

At the annual sales meeting of the Southwestern Drug Corp., held in Dallas, Texas, December 18 and 19, J. B. Magnus, vice-president of Magnus, Mabee & Reynard, Inc., was one of the speakers. Mr. Magnus attended a sales conference at the MM&R Chicago office before proceeding to Dallas.

Clarke Heads National Wax

Frank W. Clarke has bought a controlling interest in the National Wax Refining Co., Brooklyn, which specializes in the manufacture of synthetic beeswax and carnauba wax. Mr. Clarke's experience with waxes dates back to 1920.

Preis Elected Vice-President

Carl G. Preis has been elected vice-president in charge of engineering of American Can Co. He was formerly chief engineer and is also vice-president and general manager of the Amertorp Corp., a wholly-owned subsidiary engaged in the manufacture of naval and aerial torpedoes.

Heinemann With Lehn & Fink

Frank Heinemann has joined the Lehn & Fink Products Corp., and will be in charge of its Consumer's Special line of preparations. Mr. Heinemann has been with the Associated Merchandising Corp., New York, for the past twelve years as market representative for toiletries and drugs. Previous to that he was connected with the Dry Goods Alliance, Inc., for many years.

Helfrich

Customers of Helfrich Laboratories, west of the Rocky Mountains, will now be served from the Chicago office of the company. Baldwin and Baldwin, Los Angeles, and Charles H. Curry, San Francisco, have had to discontinue the Helfrich representation on the west coast, because of their entry into the service.

Innis-Speiden Karaya Folder

A handsomely-illustrated folder on the subject of Gum Karaya has been issued by Innis, Speiden & Co., New York, giving considerable market information and telling of the increasing importance of Gum Karaya. A particularly interesting feature is a table showing the variation in price over a period of fourteen years when the imports to this country increased from less than 1000 tons to more than 7000 tons. Copies are available upon request.

Martens Resigns

William C. Martens, treasurer and a director of Personal Products Corp., Milltown, N. J., resigned December 31. Mr. Martens has been treasurer of Personal Products Corp., a subsidiary of Johnson & Johnson for the past twelve months. From 1933 to 1941 he was vice-president in charge of sales and prior to that he was the director of the Modess division of Johnson & Johnson, New Brunswick, N. J.

Mr. Martens' association with Johnson & Johnson has covered a period of nearly sixteen years. His future plans will be announced shortly.

Winthrop Reorganization

January 5, James Hill, Jr., president of Sterling Drug Inc., announced that Winthrop Chemical Co., Inc., had absorbed Alba Pharmaceutical Co., Inc. Both were affiliates over which Sterling exercised management control.

Although Alba has ceased to exist, its research and manufacturing facilities in Rensselaer, N. Y. have been consolidated with those of Winthrop. Its marketing policies remain undisturbed and Dr. J. Mark Hiebert, medical director of Alba, has become assistant to Dr. Theodore G. Klumpp, Winthrop president, devoting himself largely to that company's program of medical research. Other Alba personnel have been absorbed by the surviving company.

As a result of the merger, Fairchild Brothers and Foster, a wholly-owned subsidiary of Alba, has become a wholly-owned subsidiary of Winthrop. Alba Pharmaceutical Co. was incorporated in New York August 30, 1935.

Oser Statement

Bernard L. Oser, vice-president and director of Food Research Laboratories, Inc., Long Island City, N. Y., has announced that he has no knowledge of or connection with the company in Cleveland, Ohio, that is distributing a proprietary preparation known as "Oscar Tonic Tablets."

Carsch With Lady Esther

Gust Carsch, who has had wide cosmetic experience both in Europe and in this country, has become associated with the Lady Esther Co., Chicago, as perfumer and cosmetic chemist.

Givaudan-Delawanna, Inc., dinner held at Hotel LaFayette, New York, at the conclusion of the company's annual sales meeting. The meeting was held early this year to conform with the wishes of the ODT to restrict travel during the holiday period.

DOW CHLOROFORM, U.S.P.

High standards of purity and uniformity to which Dow Chloroform, U.S.P. is held have earned for this essential pharmaceutical product wide acceptance. They are the outgrowth of experience gained over a period of many years devoted to the production of pharmaceutical chemicals and are rigidly maintained. Dow Chloroform, U.S.P. is in demand as an anesthetic and in the manufacture of internal and external pharmaceutical preparations.

• **The same high standards that govern the production of Dow Chloroform, U.S.P. are applied to all other Dow pharmaceutical chemicals. These products of distinctive purity and uniformity include Bromine, used in the manufacture of medicinal bromides, Phenol, U.S.P., Acetyl Salicylic Acid, U.S.P. and Epsom Salt, U.S.P.**

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN
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PHARMACEUTICALS

DOW
CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

Lawson General Manager Patch

Fred A. Lawson has been elected general manager of the E. L. Patch Co., Stoneham, Mass., and Edgar L. Patch, has been made assistant general manager. Mr. Lawson succeeds Lt. Col. Ralph R. Patch who began active duty in the Office of the Surgeon General December 14.

Mr. Lawson went to work for the E. L. Patch Co. soon after he left high school. He was errand boy at the office which was then in downtown Boston. After a short time he became a clerk in the office and then for three years he traveled as outside salesman. After his return to the office, he served in various capacities until he was made advertising manager. At that time he also became chairman of the committee responsible for purchasing and production. In addition to being general manager Mr. Lawson is also a director, and serves as clerk of the corporation and secretary of the directors.

Edgar Patch attended Phillips Exeter, majored in chemistry at Dartmouth and was graduated from the Harvard Business School. After spending some time in the production department, he went out as a salesman. For five years he was salesman and district salesmanager. He is a director of the company.

Zinsser to Morgan Board

John S. Zinsser, president of Sharp & Dohme, Inc., Philadelphia, has been elected a member of the board of directors of J. P. Morgan & Co.

Standing behind the Army-Navy E burgee are Gaston DuBois, vice-president of Monsanto; Major General William N. Porter, Chief, Chemical Warfare Service; Edgar M. Queeny, president of Monsanto; Brigadier General Paul X. English, Chief of Industrial Service; Charles Belknap, executive vice-president of Monsanto; and Brigadier General A. M. Prentiss, commanding officer of Pine Bluff Arsenal, Arkansas.

Monsanto Wins "E"

Monsanto Chemical Co. has been notified by the War and Navy Departments that the men and women of its Monsanto, Ill., plant, its St. Louis plant and Chemical Warfare Service, St. Louis plant No. 1, at Monsanto, Ill., which is operated by the company for the government, have received the joint Army-Navy "E" award for their "fine record in the production of war equipment."

Monsanto already had received 12 production awards and the new awards bring its total Army and Navy honors to 15. On December 31, 1941 its Monsanto, Tenn., and Anniston, Ala., plants and the executive branch of the company in St. Louis were given the original Navy Bureau of Ordnance flag award and the original Navy "E" award. Several months later the same units were recipients of the All-Navy "E" award, and on July 17, 1942 three of the joint Army-Navy "E" awards were received. This award now carries the star for continued achievement.

Winthrop Awarded "E"

For its "outstanding contribution to victory" by increasing the production of drugs needed for the armed forces, notably Atabrine, Winthrop Chemical Co. on December 17 received two Army-Navy "E" flags at twin ceremonies, first at the Rensselaer, N. Y., plant and in the evening at the Hotel New Yorker, New York.

Dr. Alfred E. Sherndal, plant superintendent, received the flag to fly over the Rensselaer plant, while Dr. Theodore G. Klumpp, president, who also attended the Rensselaer ceremony, accepted the honor in New York. Dr. Sherndal disclosed that the United States is now producing Atabrine at the rate of 800,000,000 tablets a year—an amount sufficient to treat 53,000,000 cases of malaria. In presenting the award Brig. Gen. Charles C. Hillman of the Surgeon General's office of the War Department said: "Your achievement in the increased production of Atabrine

Standing back of the Army-Navy E burgee awarded to Winthrop are: Mary E. Brennan, representing women employees; Rear Admiral Stephenson; Brigadier General Charles C. Hillman; Dr. Theodore G. Klumpp, president of Winthrop; and George Henry Gladwell, representing men employes.

Shown at the Army-Navy E award ceremonies of The Dow Chemical Company are: Major General William N. Porter, Chief, Chemical Warefare Service; James W. Driver, Dow personnel director; Captain C. D. Swain, Naval inspector of ordnance; and Dr. Willard H. Dow, president of Dow.

has nullified to a great extent the advantage gained by Japanese capture of the world's supply of quinine, our most desirable peacetime antimalarial."

Close to 100 different drugs are furnished to the Armed Forces of this country and the United Nations by the Winthrop Chemical Co. Foremost among the drugs designed to prevent infection and to protect our men in the field is Atabrine and Plasmochin, as well as such sulfa drugs as Neoprontosil and Sulfathiazole used to combat pneumonia and wound infection. Winthrop also produces drugs to combat diseases rare in this country which assume great importance now that our troops fight in the tropics. Such a drug is Naphuride, used in the treatment of African sleeping sickness.

Davis & Geck Awarded "E"

The Army-Navy Production Award was presented to the 700 men and women of Davis & Geck, Inc., Brooklyn, N. Y., at appropriate ceremonies in the grand ballroom of the Hotel St. George, January 6.

The company has, for more than a third of a century, devoted itself exclusively to the production of sterile surgical sutures and for more than a year has been operating around the clock on a three-shift basis producing sutures required by the armed forces of the United Nations, as well as for civilian use.

Distinguished representatives of the Army and the Navy participated with Borough President John Cashmore of Brooklyn and President D. L. Tilly of the Brooklyn Chamber of Commerce in the presentation of the flag, symbolic of the award, and of lapel pins to every individual in the plant. Davis and Geck, Inc., is a unit of American Cyanamid Co.

Dow Wins "E"

Two Army-Navy "E" awards for production excellence have been awarded The Dow Chemical Co., Midland, Mich. The presentation was made by Major Gen. William N. Porter, chief of Chemical Warfare Service, who declared that the United States is prepared to retaliate "in whatever quantities necessary, anytime, any place" should the Axis resort to gas warfare.

In accepting the double award, Dr. Willard H. Dow, president, emphasized the importance of chemicals in modern warfare. He pointed out that more than 2,000 chemicals are needed to build an airplane and that more than 200 different chemicals are required for a tank.

General Porter complimented Dow for production which has been in some instances double the capacity of the plants and which has been consistent. The high labor standards and employe relations were also commended.

Associations

Russell Heads Mich. Assn.

The Allied Drug & Cosmetic Association of Michigan has elected the following officers for 1943: president, William M. Russell, Monsanto Chemical Co.; vice-president, E. E. Van Allsburg, Ecclestone Chemical Co.; secretary, M. G. deNavarre, Maison G. deNavarre Associates; and treasurer, Stewart Cowell, J. T. Baker Chemical Co. The executive committee is composed of: A. S. Bedell, Beauty Counselors, Inc.; D. Melville, Frank W. Kerr Co.; G. Snider, Commercial Solvents Corp.; and A. R. Vicary, Mark W. Allen & Co

Foragers Elect

The following officers and members of the board were elected at the annual meeting of the Foragers of America, held on December 29, at the Midston House, New York: Walter A. Conklin, president; Richard R. Powell, vice-president; Arthur J. Connelly, secretary-treasurer. The board of governors consists of H. T. Georgi, W. Neilson, L. S. Huntington, Joseph Gartlan, John Curry, and Frank L. Graham. The Foragers 45th annual banquet was held on Saturday, January 9, at the Midston House.

Baltimore Drug Exchange Officers

Lester W. Jones, McCormick & Co., was elected president of the Baltimore Drug Exchange at its annual meeting in December. Other officers elected were: Leo C. Muth, Muth Bros. & Co., first vice-president; John Crozier, Calvert Drug Co., second vice-president; William J. Lowry, Loewy Drug Co., secretary, and Leroy Oldham, treasurer.

New members of the executive board are: Stanley Heuisler, Emerson Drug Co.; Edward S. Muth, Muth Bros. & Co., and George M. Armor, McCormick & Co.

Merz Re-elected S.O.C.M.A. President

August Merz, Calco chemical division, American Cyanamid Co., was re-elected president of the Synthetic Organic Chemical Manufacturers' Association for 1943 at the annual meeting of the association, held December 15 at the Chemists Club, New York.

Three new members were added to the board of governors: M. J. Hartung, president, Maywood Chemical Co.; H. L. Simons, H. L. Simons & Co., Inc.; and Eric Kunz, Givaudan-Delawanna Inc. Members re-elected to the board were: E. H. Killheffer, E. I. du Pont de Nemours & Co., Wilmington, and F. G. Zinsser, F. G. Zinsser & Co. The officers of the association are all also members of the board of governors.

C. M. Richter, Pharma Chemical Co., was re-elected first vice-president; Victor Williams, Monsanto Chemical Co., second vice-president; Ralph Dorland, Dow Chemical Co., treasurer, and Charles A. Mace, secretary.

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Prepared Monthly by U. S. Industrial Chemicals, Inc.

U.S.I. CHEMICAL NEWS

January ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1943

New Acetone Uses Indicated by Study Of Patent Files

Chemical Plays Important Part In Processes in Varied Fields

A search of the patent files reveals many new uses for acetone in a number of varied fields, somewhat of a surprising fact because acetone has generally been considered a staple chemical with a fairly well-defined field of utility. A discussion of a few of these patents may serve to indicate the variety of hitherto unexplored applications of acetone.

One such patent concerns the concentration or recovery of the values of non-metalliferous ores by froth flotation processes in which fatty acid substances are employed as promoters. The inventor states that the power of the promoters can be very greatly increased by dilut-

(*Continued on next page*)

Reactions Show Possibilities of Ethyl Sodium Acetone-Oxalate

Versatility Clearly Indicated by Formation of Ring Compounds

A study of the reactions of ethyl sodium acetone-oxalate, a compound having the formula $CH_3COCH = C(ONa)COOC_2H_5$, shows many new interesting possibilities.

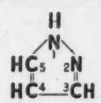
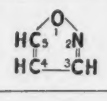
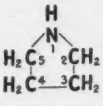
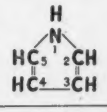
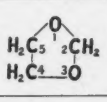
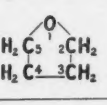
The versatility of this chemical or the acid derived from it, alpha, gamma-dioxo-valeric acid, or its esters, in the formation of ring compounds may be seen from the table below. The first line of the table, for instance, shows that hydrazine reacts with ethyl sodium acetone-oxalate to give 3-methyl-5-pyrazolecarboxylic acid. One reaction not included below is that of ortho-aminobenzaldehyde, which is reported to produce a quinoline derivative, $C_{11}H_9O_2N$, whose structure has not been completely elucidated [Monatshefte für Chemie **52**, 59-67 (1929)].

Samples of ethyl sodium acetone-oxalate may be obtained from U.S.I. on request for experimental work.

Ethylene Used as Alkylator To Produce Anti-Knock Gas

CHICAGO, Ill. — A method for alkylating isobutane by ethylene in the presence of a particular type of catalyst to produce a motor fuel of relatively high anti-knock value has been developed by two men here, according to a patent that was granted recently.

ETHYL SODIUM ACETONE-OXALATE $CH_3COCH = C(ONa)COOC_2H_5$

RING COMPOUNDS	SUBSTITUTED GROUPS	REAGENT	REFERENCE
PYRAZOLE 	3-methyl; 5-carboxylic acid	HYDRAZINE	Knorr A.279,217 (1894) German Patent 74,619,F.3,938
	3-methyl; 1-phenyl; 5-carboxylic acid 5-methyl; 1-phenyl; 3-carboxylic acid	PHENYLHYDRAZINE	*Claisen & Roosen A.278,279,288 (1893)
ISOXAZOLE 	3-methyl; 5-carboxylic acid 5-methyl; 3-carboxylic acid	HYDROXYLAMINE	*Claisen, B.24,3908 (1891)
PYRROLIDINE 	2,3-dioxo; 4-acetyl; 1,5-diphenyl	BENZALANILINE	Schiff, Gigli, B.31,1307 (1898)
	4,5-dioxo; 1-methyl; 2-phenyl; 3-acetyl	BENZALDEHYDE & METHYLAMINE	German Patents 280971, 283305,290531 F.12,792, 793,797
PYRROLE 	4-methyl; 3-acetyl; 2-carboxylic acid	AMINOACETONE	Piloty, Blömer B.45,3752 (1912) Fischer et al., A.461:244 (1928)
1,3-DIOXOLANE 	4-oxo; 2-trichloromethyl; 5-acetyl methylene	CHLORAL	Schiff B.31,1305 (1898)
OXOLANE 	2,3-dioxo; 4-acetyl; 5-phenyl	BENZALDEHYDE in piperidine	Ruhemann J.C.S.89 1239,1240 (1906)
	2,3-dioxo; 5-phenyl; 4-cinnamoyl	BENZALDEHYDE with dried HCl	" " " "
BENZENE	3-methyl; 5-hydroxy; 1-carboxylic acid	BARIUM HYDROXIDE	Claisen B.22,327 (1889)
	5-methyl; 3-hydroxy; 2-ethoxalyl; 1-carboxylic acid	SODIUM ACETATE	C.A. 32,3340 (1938)
PYRIDINE	4-methyl; 3-acetyl; 2,6-dicarboxylic acid	AMMONIA	Mumm, Bergell B.45,3045 (1912)
	4-methyl; 3-acetyl; 6-carboxylic acid	AMMONIA	
	4-methyl; 5-acetyl; 2,6-dicarboxylic acid	AMMONIA	C.A. 26 2171 (1932)
	2,6-dimethyl; 3,4-dicarboxylic acid	ETHYL β-AMINO-CROTONATE	Mumm & Hunecke B.50,1573 (1917)

*See also B.45, 3045 (1912). Abbreviations: A. — Liebig's Annalen; B. — Berichte der Deutschen Chemischen Gesellschaft; C.A. — Chemical Abstracts; F. — Friedlaender, Fortschritte der Theerfarben Fabrikation; J.C.S. — Journal of the Chemical Society.

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January ★ **U.S.I. CHEMICAL NEWS** ★ 1943

Many New Chemical Developments Noted During the Past Year

An idea of the outstanding chemical progress made during 1942 can be gained by a brief review of the major developments summarized in the past year's issues of U.S.I. CHEMICAL NEWS. During 1942 the following topics were discussed in leading articles in this publication:

January. Reactions of urethan. Unusual possibilities of alkyl phosphates.

February. Importance of water in resin solutions. Use of chemicals in lengthening the life of fish nets.

March. Applications of ethyl benzoylacetate in dye manufacture and chemical synthesis. Luminescent finishes.

April. Ethyl carbonate as a raw material. Lined steel drums.

May. Possibilities of ethyl acetoacetate. Novel experimental vinegar generator.

June. Determination of the combined acids in cellulose mixed esters. New chemical to end corrosion of iron by lacquers.

July. Utility of ethyl sodium oxalacetate in chemical synthesis. Ethyl formate for treating yarns.

August. Carbon dioxide as a fire extinguisher and inflation agent. Availability of ethyl sodium acetone-oxalate for experimental work.

September. Resin emulsions as possible latex substitutes. Novel perfumes from Indian plant lore.

October. New method for studying drying rates of lacquer films. Use of heat treatment in improving quality of yellow pigments.

November. Preparation of ethyl oxalacetate. Puerto Rican plants yield essential oils.

December. The prevention of foam in casein paints and other protein compositions. Procedure for improving synthetic camphor yield.

(*Copies of these issues are available on request*)

Varnish for Maintaining Sterile Operative Field

A new skin varnish for maintaining sterility in the operative field has been developed according to the following formula:

Santicizer B	16.5 g.
Acetone	605
Ethyl cellulose	165
Ethanol	715
Castor oil	16.5

Tests Show Superiority of Ethanol as Disinfectant

Ethanol is considered to be an ideal disinfectant, according to experiments in which the effect of ethanol in adsorption tests, particularly in the disinfection of hands, was studied.

One of the special advantages claimed for ethanol is its capacity to kill large numbers of bacteria. It was discovered that when two loopfuls of solid growth of staphylococci or B. coli are suspended in only two drops of 96% ethanol, complete disinfection takes place in a few minutes, whereas 1% Zephirol, 5% Sagrotan and 0.1% mercury solutions fail to achieve this.

New Acetone Uses

(*Continued from previous page*)

ing the flotation reagent with about 20% or less of a water-soluble ketone such as acetone.

Another patent of interest involves the preparation of sulfanilylamino-pyridine compounds. A mixture of acetone and pyridine is used to form a reaction medium for reacting p-acetylaminobenzene sulfonyl chloride with alpha amino pyridine for the production of 2-acetylsulfanilylamino-pyridine.

Printing-Ink Binders

Rapid drying properties, high gloss and water-insolubility at slightly elevated temperatures are among the advantages claimed for the use of acetone-formaldehyde resins as binders for printing inks. The formation of such an agent comprises interacting formaldehyde with acetone in the presence of an alkaline catalyst, pigmenting material, and a liquid organic solvent such as acetone.

In another patent, acetone is suggested in combination with nitrocellulose to form an adhesive for use in holding metal parts to be welded into position, such as threaded steel buttons to a background of steel ship plates.

A more simple method of producing alcohols of the acetylene series than those now in use is claimed in a recent patent. Such alcohols are prepared directly from acetone and acetylene by bringing into contact acetylene with a mixture of acetone and an aqueous solution having an alkaline reaction.

Acetone is also suggested by an inventor for the manufacture of beta-cyanoacrylic acid esters. According to this process, such esters are obtained by reacting an ester of alpha-chloroacrylic acid with a cyanide of an alkali metal or an alkaline earth metal at approximate room temperature in the presence of water and acetone.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A moistureproof sealer particularly developed to seal waterproof papers used as liners in shipping containers is said to even protect goods against immersion. A white, colorless fluid, the adhesive seals overlapping liner seams against air, moisture and temperature extremes. **(No. 650)**

U S I

A liquid temperature indicator employing the same principle as pellets and sticks is intended for use in signalling temperatures. It is available in melting points from 125 to 1600° F. When applied, it dries instantly, then liquefies sharply when the desired temperature is reached. **(No. 651)**

U S I

A grease-impervious paper box for packaging ointments and similar substances is offered, which has an outside covering of parchment paper supplementing the chemical compound which coats the inside. Although not impervious to water and grease in the same degree, it is said to successfully package substances which have a water content up to 5%. **(No. 652)**

U S I

A protective paint is offered for exterior and interior surfaces having an appreciable amount of exposed metal. The primers are said to be rust inhibitive and provide a tough, elastic film which expands and contracts at the same rate as the metal. **(No. 653)**

U S I

Citric acid substitutes are now being produced domestically by a manufacturer who made similar products in Europe during the last World War. **(No. 654)**

U S I

A prepared catalyst for isomerization processes has been developed, consisting of activated bauxite impregnated with 15 to 20% of anhydrous aluminum chloride. **(No. 655)**

U S I

Non-ionic emulsifiers are available commercially which are said to offer very interesting possibilities in the manufacture of synthetic rubbers by polymerization of butadiene, styrene, acrylonitrile or other unsaturated compounds. **(No. 656)**

U S I

Static-conductive linoleum is offered which is described as nonsparking and highly conductive of static, yet providing adequate protection against accidental grounding from service charges. It is said to meet Ordnance Department specifications for floor and table coverings in explosives operations. **(No. 657)**

U S I

A new colorimeter of the continuous-flow type is offered, which is said to permit the determination of light transmission of a liquid passing through the instrument. Its application, therefore, is suggested for the continuous control of chemical processes in which the color or turbidity of a liquid must be checked as an indication of concentration or other property. **(No. 658)**

U S I

Paint brush bristles have been developed from Nylon which are not only said to have the required taper, but also resiliency, toughness, length and inertness to paint ingredients. At present their use is being restricted to military purposes. **(No. 659)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND STREET, NEW YORK — CHEMICALS · INDUSTRIAL · ANTI- · SOLVENTS · ALCOHOLS · FREEZE · USI SERVICE TO INDUSTRY — BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—All regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%
Absolute
U.S.I. Denatured Alcohol Anti-freeze
Super Pyro Anti-freeze
Solox Proprietary Solvent
Solox D-I De-icing Fluid

ANSOLS
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Butyl Oxalate
Ethyl Oxalate

PHTHALIC ESTERS
Amyl Phthalate
Butyl Phthalate
Ethyl Phthalate

OTHER ESTERS
Diatol
Ethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

OTHER PRODUCTS
Acetone
Collodions
Curbay B-G
Curbay Binders
Curbay X Powder
Ethylene
Ethylene Glycol
Nitrocellulose Solutions
Potash, Agricultural
Urethan
Vacatone

Registered Trade Mark

A.P.M.A. Meeting in June

H. B. Johnson, chairman of the Time and Place Committee of American Pharmaceutical Manufacturers' Association, has announced that as the situation now stands, the next annual meeting of the association will be held at the Homestead, Hot Springs, Va., June 14-17.

Law Heads Alumni Assn.

Frank A. Law, president of John Wyeth & Brother, Inc., Philadelphia, and a member of the board of trustees of Temple University, was elected to the presidency of the university's General Alumni Association at the annual meeting of the association's board of directors, held in Mitten Hall on December 16.

People

Hoyer in Navy

David G. Hoyer, chief chemist for John Powell & Co., New York, is serving as a lieutenant, (J. G.) in the U. S. Naval Reserve. He is now stationed at the U. S. Naval Training Station at the University of Arizona, Tuscon, Ariz.

Kinnard in Army

Owen Young Kinnard, who has been covering the middle west and south for Parfums Schiaparelli, is now in the Air Corps of the U. S. Army and is attending officers' training school.

Patch Commissioned Lt.-Colonel

Ralph R. Patch, president of E. L. Patch Co., Stoneham, Mass., and a member of the executive committee of the American Drug Manufacturers' Association, is now on active duty as a lieutenant colonel in the Army. He has been assigned to the office of the Surgeon General where he will handle manpower problems in the drug field.

Montgomery-Waller

A week after being commissioned a naval aviator at the Jacksonville Training Station, Robert W. Montgomery, Ensign, U.S.N.R., eldest son of Mr. and Mrs. John H. Montgomery, Montclair, N. J., was married, November 26, to Doris Betty Waller, daughter of Mr. and Mrs. Guy E. Waller, Rocky Mount, N. C. After a brief visit to Montclair. they both flew to San Diego, Calif., where Ensign Montgomery will be temporarily stationed in preparation for active service.

Ensign Montgomery's father is secretary of Fritzsche Brothers, Inc.

Murphy to A. C. S. Journals

Walter J. Murphy has resigned as editor of "Chemical Industries" to accept the position of editor of the publications of the American Chemical Society, succeeding the late Harrison E. Howe. Mr. Murphy, who takes over his new duties February 1, will be located in the editorial offices of the publications at 1155 16th St., N. W., Washington, D. C.

Son Born to the Salomons

A son was born to Mr. and Mrs. Richard B. Salomon on December 10 at the French Hospital, New York. The child has been named Richard Edward. Mr. Salomon, who is on a leave of absence as president of Charles of the Ritz, is an officer's candidate for the Signal Corps.

Caldwell-Warren

Mrs. Edith Cantrell, Lawton, Okla., has announced the engagement of her daughter, Dorothy Edna Caldwell, to Captain Northam Warren, Jr., of New Canaan, Conn., who is now stationed as an instructor in the Officer's Training Course of the Fie'd Artillery School, Fort Sill, Okla. The wedding is scheduled to take place in the chapel at Fort Sill about the middle of January.

Donald McDonough to Marry

The engagement of Lorraine M. Dwyer to Lieutenant Donald J. McDonough, U. S. A., was announced January 11 by the parents of the prospective bride. Mr. McDonough, who is the son of Francis J. McDonough, president of New York Quinine & Chemical Works, Brooklyn, is an alumnus of Brooklyn Preparatory School, Georgetown University, and Fordham Law School. He is a member of the Huntington Crescent Club, the Montauk Club of Brooklyn, and the Downtown Athletic Club of New York.

Charles Bryan Marries

Lieutenant Charles Crooks Bryan, U. S. Army Air Corps, was married to Margaret Adams Williamson, December 4, 1942, at Cheelcroft, N. J. Mr. Bryan is on leave of absence from Fritzsche Brothers for the duration.

Financial

Noxzema Report

Noxzema Chemical Co. reports for the eleven months to November 30 a net income, after $507,000 taxes, of $161,-652, or 41 cents each on 393,076 combined class A and common shares. This compares with a net income of $248,344, or 63 cents a share for the first eleven months of 1941 when the taxes amounted to $248,350.

Net sales this year were $1,625,000 against $1,493,000.

Obituaries

Florence T. Helmer

Florence T. Helmer, advertising manager of Sylvania Industrial Corp. died of a heart attack December 25 at her home in New York.

Before becoming advertising manager of Sylvania, Miss Helmer was treasurer of the Newton Falls Paper Co., Watertown, N. Y.

Harrison E. Howe

Harrison E. Howe, editor of "Industrial and Engineering Chemistry" publication of the American Chemical Society died in Washington December 10. He was sixty-one years old.

Dr. Howe was born in Georgetown, Ky, was graduated from Earlham College, Richmond, Ind., and did graduate work at the University of Michigan and the University of Rochester from which he received a Master of Science degree. He had served as chief chemist of the Sanilac Sugar Refining Co.; chief chemist of Bausch and Lomb Optical Co., Rochester, N. Y.; as manager of the commercial department of A. D. Little, Inc., Cambridge, Mass., and as manager of that organization's Montreal office.

In World War I he was consulting chemist for the Nitrate Division of the Ordnance Bureau of the Army and before becoming editor of "Industrial and Chemical Engineering" in 1921, he was head of the Division of Research Extension of the National Research Council.

Dr. Howe was chairman of the original advisory committee of the Chemical Section of the War Production Board.

Malvern H. Smith

Malvern H. Smith, manager of the Geer Drug Co., Greenville, S. C., died December 7 at the age of sixty-six.

Mr. Smith joined the Geer Drug Co. at the Spartansburg, S. C. branch as assistant manager when it was opened in 1910. When the Greenville branch was opened in 1920 he was made manager of it.

EYES THAT GUARD YOUR REPUTATION

The human element enters even into the production of fine chemicals—one of the most closely controlled operations in all industry.

On the accuracy with which this analytical chemist reads the color of his control sample, for example, may depend the purity of the next shipment of pharmaceuticals that goes into your finished product—and the continued high reputation of your products.

That's why Monsanto control laboratories are staffed by highly skilled chemists. And that's why you can depend on *controlled* quality in *every* shipment of *every* Monsanto pharmaceutical that reaches your plant.

MONSANTO CHEMICAL COMPANY,
Organic Chemicals Division, St. Louis, Mo.

ACETOPHENETIDIN, U. S. P.

Mol. Wt. 179.11

Specifications: White crystals or crystalline powder; solubility in ethyl alcohol 95% (1:15), complete; m.p. 135.0° C. min.; ash 0.05% max. No crystals retained on 14 mesh screen; 5% powder retained on 100 mesh.

MONSANTO CHEMICALS

Monsanto pharmaceuticals of *controlled* quality:

Acetanilid U. S. P.
Acetophenetidin U. S. P.
Acetyl Salicylic Acid (Aspirin)
Benzoic Acid U. S. P.
Caffeine U. S. P.
Dicalcium Phosphate
Chloral Hydrate U. S. P.
Chloramine-T U. S. P.
Glycerophosphates
Magnesium Phosphates
Methyl Salicylate U. S. P.
Phenol U. S. P.
Phenolphthalein U. S. P.
Phosphoric Acid
Potassium Ammonium Phosphate
Potassium Phosphate
Saccharin U. S. P.
Salicylates
Salol U. S. P.
Sodium Benzoate U. S. P.
Sulfanilamide U. S. P.

SERVING INDUSTRY . . . WHICH SERVES MANKIND

F.T.C. ACTIVITIES

Stipulations

Halex Co.

A. P. Klase, trading as Halex Co., Sappington, Mo., selling "Halex," has stipulated to cease representing that the preparation is of value for hay fever, asthma, catarrh, migraine, sinusitis, toothache, cold sores, drowsiness, fainting spells, lung colds, influenza or sore throat; or that prospective agents, salesmen, distributors or other representatives can make profits or earnings within a specified period of time which are in excess of the average net profits or earnings which have heretofore customarily been made in like periods of time by his active full-time agents, salesmen, distributors, dealers or other representatives in the ordinary and usual course of business and under normal conditions and circumstances.

Permanent Wave

Bonat & Bonat, Inc., New York, selling supplies for use in giving permanent waves consisting of various solutions and pads sold under the names "Padol Machineless Permanent Wave" and "Lifeoil Machine Permanent Wave" and a shampoo designated "Dio Dane No. 100," has stipulated to cease representing that the Padol Machineless Permanent Wave nourishes the hair or gives the hair a deeper wave; that Lifeoil Machine Permanent Wave pads contain lanolin; or that Dio Dane No. 100 nourishes the hair or is not a soap.

Shampo-Kolor

Valligny Products, Inc., New York, selling and distributing a coal tar hair dye product designated "Shampo-Kolor," has stipulated to cease disseminating any advertisements which fail conspicuously to reveal therein the following: "Caution: This product contains ingredients which may cause skin irritation on certain individuals and a preliminary test according to accompanying directions should first be made. This product must not be used for dyeing the eyelashes or eyebrows; to do so may cause blindness." The stipulation provides, however, that such advertisement need contain only the statement: "Caution: Use only as directed on the label," if such label bears the first described caution conspicuously and the accompanying labeling bears adequate directions for such preliminary testing before each application.

Not Weight Reducers

Frank E. Carter, trading as Three Palms Pharmacy, Los Angeles, selling "Vitamalt," and "Natura Calcium Compound and Vitameal," has stipulated to cease representing that either of the preparations has any reducing action or that any weight loss resulting from following the directions for their use is other than such as would naturally result from a starvation diet or abstinence from food; that the preparations or the diet prescribed therewith can be depended upon to effect weight reduction of ten pounds in five days or that such diet will effectuate any weight reduction in excess of that actually resulting therefrom; that the diet prescribed with Vitamalt will not cause or result in weakness or hunger; that the use of either preparation with rich food has any building tendency or any practical significance from the standpoint of caloric intake; that either of the preparations will give new life and freshness to the skin or free it from pimples or blotches, keep the glands or nerves functioning or nourished, have any beneficial effect upon the body metabolism, "vitalize" the system, cause the pains of rheumatism, arthritis, or lumbago to disappear or provide a competent treatment for nervousness, rheumatism, stomach trouble or constipation; or that use of the preparations as directed will effectuate a weight reduction safely without lowering resistance to disease or otherwise endangering the health.

The respondent further agrees to cease representing that Vitamalt is a tonic or that the "Vitamalt Way" of allegedly reducing weight does not consist of fasting; that Vitamalt supplies all the needed vitamins or that the specific function of vitamins is to feed the various glands of the body or that the administration of vitamins in excess of the ordinary requirements will result in health, superior physical condition or strength, or increase resistance. The respondent further agrees to cease certain other representations concerning the efficacy of vitamins.

Food and Drug Tablets

Bertha B. Johnson, trading as Coates Concentrates, Chicago, agrees to cease misrepresentation of food and drug tablets.

With respect to her food tablets, designated as "Coates C8 Vegetable Tablets," "Coates B5 Vegetable and Dulse Tablets," "Coates B6 Tablets," "Coates B3 Vegetable Tablets," "Coates BA Vegetable Tablets," "Coates C16 Vegetable Tablets," and "Coates CII Tablets," the respondent agrees to cease representing that the tablets will correct, prevent, or overcome mineral or vitamin deficiencies that they will provide more minerals and vitamins than would obtain from assimilating two pounds of fresh vegetables; that they will provide an alkaline balance or are tissue building or rich in vitamins or minerals; that they will provide a substantial amount of silicon for the enamel of bones and teeth or that they will preserve youthfulness, relieve pain, balance weight, or heal; that they are a brain or nerve food or are important to the liver, kidneys, spleen or pancreas, or that they provide laxative effects; that Coates CII Tablets will relieve symptoms of high blood pressure or that Coates B6 Tablets are a tonic or will overcome "tired feeling."

The respondent also agrees to cease disseminating any advertisement which fails to reveal that her drug tablets designated "Coates C14 Tablets" and "Coates Concentrates C12 Laxative Tonic Tablets" should not be used when stomachache, nausea, vomiting or other symptoms of appendicitis are present; provided, however, that such advertisement need only contain the statement: "Caution, Use only as directed," if and when the directions for use in the labeling contain a warning to the same effect.

The respondent further stipulates that she will discontinue representing that neither of the drug preparations contains drugs.

BAYONNE COMPANY
INCORPORATED
404 FOURTH AVENUE, NEW YORK, N. Y.
TELEPHONE: MURRAY HILL 5-0250-1-2
BAYCO
BC
INC.
Aromatic Chemicals-Essential Oils

INDUSTRY'S BOOKS

Essentials of Pathology, by Lawrence W. Smith, M.D., Professor of Pathology, Temple University School of Medicine, and Edwin S. Gault, M.D., Associate Professor of Pathology, Temple University, Second Ed., 904 pp., Illus., D. Appleton-Century Co., New York, Cloth $10.

By definition, pathology represents the scientific study of the alterations of cell function and form which go to make up disease. When the first edition of this work appeared, severe criticism was anticipated over the case history method of presenting the subject. It was because the criticism was almost entirely constructive that the authors were encouraged to revise the work taking into consideration the many helpful suggestions received from both students and teachers as to how the book might be improved. Accordingly, the first thirteeen chapters have been completely rewritten. They include a rather full discussion of pathologic principles and the mechanism thereof, as well as the more objective gross and microscopic detail. Likewise, a brief bibliography has been added. Three types of reference have been included; certain documents of historical importance, recent monographs and reviews, in which may be found complete bibliographers of any particular subject, and finally, current papers of interest. This is intended to guide the student to original source material should he be interested. The case histories in the revised part of the book have been condensed both to meet the suggestions of many colleagues and to conserve space. The slide numbers have been omitted in the histories which have been revised as merely being a source of confusion to the reader. One new page of illustrations has been added as well as one or two text figures and a frontispiece. The work is divided into three main parts: Part I—General Pathology; Part II—Oncology; Part III—Systemic Pathology. There are very many illustrations of marked interests with a considerable number of color plates through out the text.

Law In Medical and Dental Practice, by Jack Neal Lott, Jr., Dean of the University of Louisville School of Law, and Robert Hanes Gray, Assistant Professor, University of Louisville School of Law, 499 pp., The Foundation Press, Inc., Chicago, cloth, $4.75.

It is the purpose of this book to indicate something of the remedial and preventive measures which have been taken to control the practice of medicine and dentistry. The primary objective in the arrangement of this work has been to include materials dealing with the professional legal problems with which the average physician and dentist is confronted. In selecting the materials included in this volume, effort has been made to secure cases and law review notes which should be easily understood by one not having a background in law. The facts in each of the cases have been given in considerable detail in the hope that this would make the subject more stimulating for medical and dental students, and also serve to clarify the application of the principles of law involved. Contents: Chapters I—Introduction: II—Physician and Patient; III—Evidence; IV—Compensation; V—Autopsies; VI—The Regulation of the Practice of Medicine and Dentistry. Appendix A: Principles of Medical Ethics. Appendix B: Code of Ethics of the American Dental Association. Table of Cases. Index.

The Organization and Training of Industrial Fire Brigades, by Captain John C. Klinck, Memphis Fire Department, 119 pp., Paper binding, S. C. Toof & Co., Memphis, $1.

This book has been prepared expressly for use by fire department officers who are confronted with the problem of organizing and training private fire brigades within industrial plants, storage warehouses and other large buildings. It is the purpose of this book to provide the instructor with a comprehensive illustrated outline which will help him form and train private fire brigades. A carefully outlined procedure enables the fire chief to put on, through the co-operation of the public, particularly business and industrial heads, a large scale training program and thus furnish maximum fire protection to all business and industrial establishments participating.

Chemical Engineers' Manual, by Donald B. Keyes, Professor of Chemical Engineering, University of Illinois, and A. Garrell Deem, Assistant Professor of Chemical Engineering, University of Illinois, 221 pp., John Wiley & Sons, Inc., New York, Cloth $2.50.

The purpose of this manual is to present to the chemical engineering student and practicing engineer those equations and tables which are constantly used by the profession. Up to the present time this material has been available only in books which also contain a mass of information used only occasionally. The material has been taken largely from well-known textbooks and handbooks, and a serious attempt has been made to standardize the symbols throughout the entire book. This work should undoubtedly be on the desk of every chemical engineer.

Gas Warfare, A Monograph For Instructors, compiled by W. K. Fitch, Editor, "The Pharmaceutical Journal," 103 pp., paper bound, The Pharmaceutical Press, London, price 2s 6d, postage 3d.

Two objects have been in mind in the compilation of this booklet: (1) the grouping together of information normally scattered throughout various publications, and (2) the provision of chemical and pharmaceutical material of a more detailed character than that found in the usual official and unofficial memoranda on gas warfare. In the compilation of this booklet use has been made of various official and several unofficial sources of information, as well as several important articles having a bearing on chemical warfare, previously published in "The Pharmaceutical Journal."

MORE MANPOWER

The hands that filled clips and cartons with cartridges are now doing other war work

THANKS TO NEW AUTOMATIC MACHINES

It has always been our job to devise new machines that would free the human hand and brain for more important tasks . . . So when we were given the assignment of creating a machine that would load cartridges into clips, we had the designers right in our own organization with the "know how" to do it.

Starting from scratch, with just a few clips and cartridges for experimenting, we designed and built a loading machine for Garand clips and another for Springfield clips in only three months' time. Quantity production followed. Later, we devised a machine for loading .30 caliber cartridges into a carton.

Many other types of machines built by us are being used in the armament program. And our standard wrapping machines, too, are turning out tons of food and other essential supplies for the armed forces, as well as for civilian needs.

Timely assistance for package goods manufacturers

Though extremely busy on war work, we are anxious to assist package goods manufacturers in every possible way. This includes not only servicing of existing machines, but aid in obtaining additional machines of our make, when necessary . . . If you need a wrapping machine, or machines, write us describing the type of wrapping to be done, and our Wrapping Machine Procurement Service will endeavor to put you in touch with a manufacturer who can sell or lease you the right machine.

PACKAGE MACHINERY COMPANY · Springfield, Massachusetts

NEW YORK CHICAGO CLEVELAND LOS ANGELES TORONTO

Mexico: Agencia Comercial Anahuac, Apartado 2303, Mexico, D.F.

Argentina: David H. Orton, Maipu 231, Buenos Aires

England: Baker Perkins, Ltd., Peterborough Australia: Baker Perkins, Pty., Ltd., Melbourne

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

PRODUCTION FORUM

By FRANCIS CHILSON
Production Engineer

JOB CLASSIFICATION

A good deal of discussion is going on concerning methods of establishing a job classification system as a means of wage payment and also as a means of grading the importance of jobs and workers. A number of attempts have been made, but always there is something lacking, and the effort at job classification very often ends in confusion. It is obviously very difficult to set up a standard of comparison between the operation of a label machine and a rotary tablet press. I tried establishing factors of skill, fatigue, and so forth, and on a time and motion analysis basis, but I didn't get anywhere. I then came to the conclusion that the best approach was to classify the worker and then appraise the job in terms of worker classification. The classifications I established were as follows: Supervisors, masters, journeymen, helpers, and laborers. The classifications were applied alike to men and women.

A supervisor is a person having a proven executive ability, organizing talent, broad mechanical understanding and experience, cooperativeness, and accuracy.

A master is a person having broad mechanical understanding and experience, a certain amount of executive ability, cooperativeness, and accuracy. It is from the ranks of masters that supervisors would normally be selected. A master cannot only plan and supervise the work of others, but can be depended upon to execute his own work without an excessive amount of supervision.

A journeyman is a person with broad experience and fairly extensive mechanical skill. He is accurate and dependable but requires supervision.

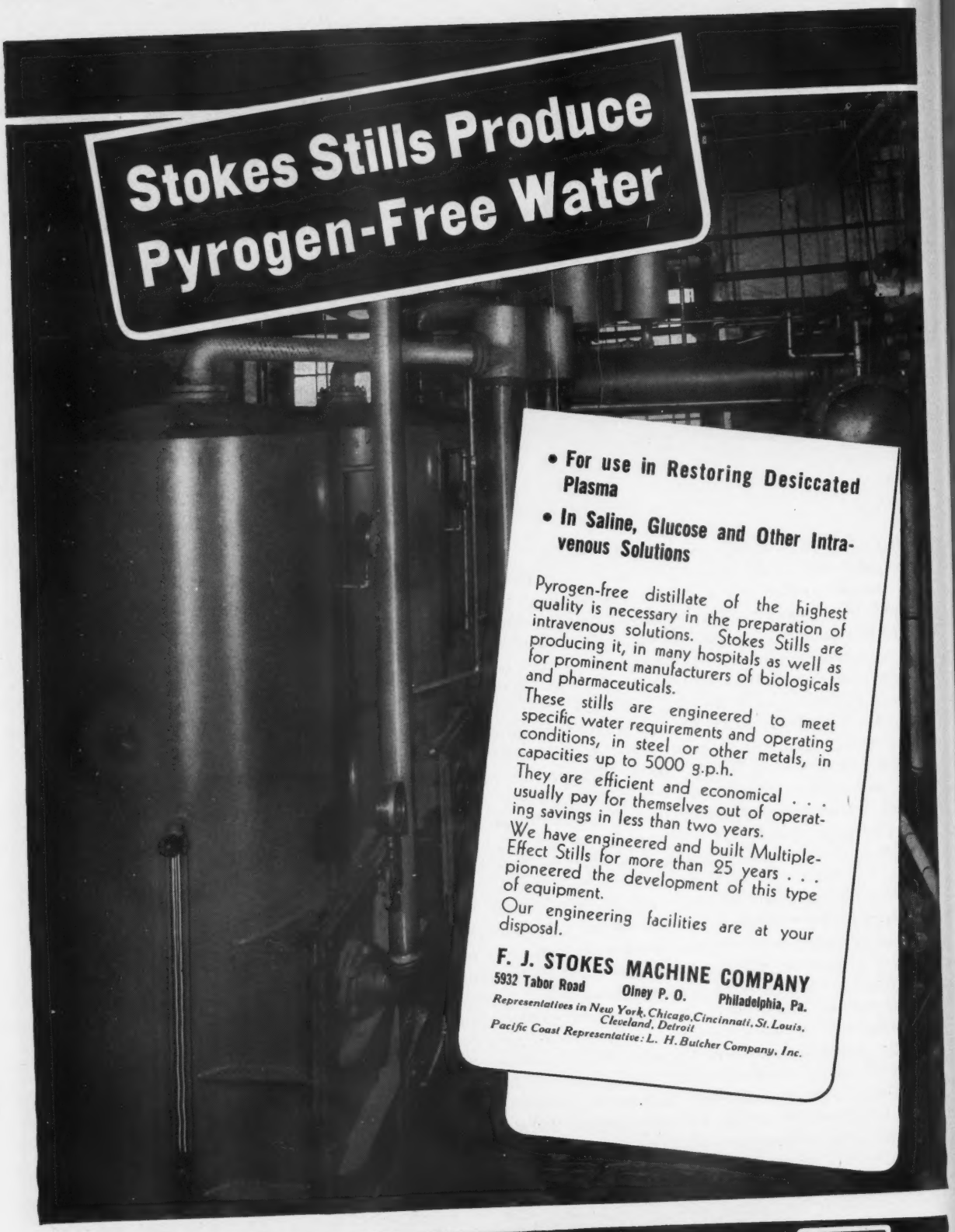
A mechanic's helper is a person of fair experience and limited mechanical skill. He cannot be depended on to work on his own initiative without considerable supervision.

A laborer is a person having neither experience nor mechanical skill and who is unable to work without close supervision.

Now if you have a set of standards like these, you can compare operations such as running a tablet machine or a labeling machine or a lathe, because the very nature of the operation will indicate what type of experience is required and how much mechanical skill, initiative, and so forth are needed. I'll admit the classifications are open to criticism, but where I have applied them, they have worked satisfactorily. Until someone is able to develop a method of job classification which will leave the human element out of it altogether, I will continue to use this system.

LOADING TRUCKS

The problem of loading outgoing trucks is one which affects all of us. In an ideal sense it is desirable to use a loading dock of tailboard height so that skids of material can be trucked directly into the vehicle thus making the loading job a oneman proposition. However, truck heights vary, and they change as the weight on the springs increases or decreases. Therefore, the best that can be done in most cases is to bring the loads or skids of material to the tailboard and from that point load the truck by hand. The other day, however, I saw one of the trucks owned by the United Parcel Service which had a self-contained elevating tail gate. The tailboard, when lowered, became the platform of a hydraulic lift which was built as an integral accessory of the truck. This elevating tailboard could be lowered to a point within three inches of the ground, and in its raised position, it was level with the bed of the truck. Such a device can be utilized of course only on your own trucks, but it would be a fine thing if all trucks were equipped with elevating tail gates, as it then would make no difference whether you had a shipping dock or platform or had to load from ground level.


Stokes Stills Produce
Pyrogen-Free Water
• For use in Restoring Desiccated Plasma
• In Saline, Glucose and Other Intravenous Solutions
Pyrogen-free distillate of the highest quality is necessary in the preparation of intravenous solutions. Stokes Stills are producing it, in many hospitals as well as for prominent manufacturers of biologicals and pharmaceuticals.
These stills are engineered to meet specific water requirements and operating conditions, in steel or other metals, in capacities up to 5000 g.p.h.
They are efficient and economical . . . usually pay for themselves out of operating savings in less than two years.
We have engineered and built Multiple-Effect Stills for more than 25 years . . . pioneered the development of this type of equipment.
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PROCESSING EQUIPMENT
FJS Est. 1895

While I am on the subject of outgoing trucks I'd like to make a couple more observations. In spite of the gas and rubber shortage it is surprising how many truck owners fail to schedule their trucks so that they are loaded coming and going. It is also surprising to find so few privately owned trucks equipped with service recorders. In case you are not familiar with their use I'll explain that a service recorder is a device which, when mounted on a truck, indicates the number of stops the truck has made within a given interval and how long each stop took. By knowing the number of stops the truck should make you can make the driver account for the rest of them, and, by tying the record up with gas consumption and mileage you can prevent the little private hauling jobs with which so many truck drivers like to turn a penny or two.

To speed up multiple deliveries, especially in cases where your own trucks are used for city deliveries and the like, it is desirable to plan the route for the driver and arrange customer's orders for him in route sequence so that deliveries can be made without forcing the driver to do a lot of rehandling and re-checking. This can be accomplished in one way by building a number of light, plywood cabinets equipped with casters and designed exactly to fit the delivery trucks. Customers' orders are packed ahead of time into these cabinets in the shipping room and thus the loading of a city delivery truck is made a matter of seconds. As they are emptied in sequence, the light construction of the portable cabinets enables the driver to shuffle them around so that the loaded one is always at the rear and thus he is always enabled to unload from the tailboard.

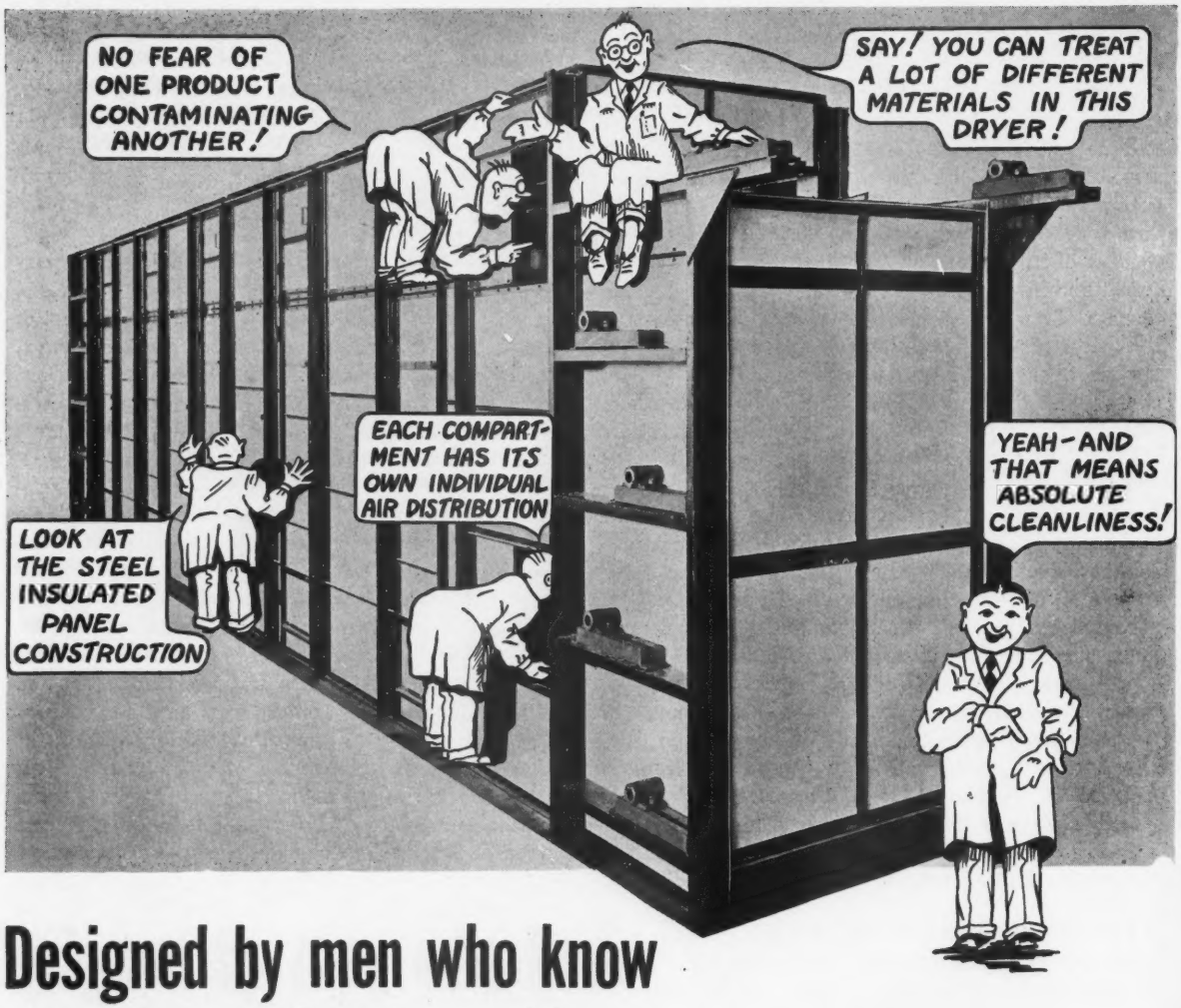
BUY NOW, PAY NOW, GET LATER

Several months ago I made what seemed a startling proposal in suggesting that you place orders for equipment you are likely to need and pay for it now but accept delivery after the war. For many reasons this seemed to me at the time good hard common sense. Apparently the idea is better than I thought because Kaiser the Shipbuilder recently advocated it as a national policy for all business men to follow as a means of controlling inflation and preventing the terrific letdown that must certainly come to the mechanical industries especially with the termination of the war. There's an angle to this proposal that I want to emphasize. Your mechanical depreciation is piling up to beat hell. Your equipment, especially packaging equipment, is in the main, neither designed nor built for the sixteen and even twenty four hour service it is getting. The war will certainly last through this year and probably through next which means simply that by the end of that time you will have piled up the equivalent of several years depreciation. Your breakdowns will increase at an ever accelerating rate. It seems therefore good sense to have new equipment ready when your present units are ready for the junk pile. There is still another angle to the subject: you know as well as I do that military necessities are not entirely insatiable. There'll come a time when the clouds begin to break and the brass hats can see more certainly where they are going, when the brake will be applied to military purchases. As war work begins to diminish your bought and paid for equipment will get immediate attention. In dealing with reputable houses I can see no credit risk whatever.

CUTTING CLERICAL WORK

There is a certain clerical advantage in advance payments which might well be extended to all purchases. The check and voucher could easily be made a part of the purchase order form and typed simultaneously. The clerical routine involved in originating a purchase is generally as follows: persons who have authority to do so write up purchase requisitions usually in duplicate. A copy of the requisition goes to the purchasing department where, in most cases, exactly the same information is re-typed again on a purchase order form. Copies are made for follow-up purposes and notifications to the receiving clerk. Upon receipt of the goods or part of them the receiving clerk prepares a receiving ticket containing again exactly the same information. When the invoice is received by the purchasing department it is matched up with the receiving ticket and passed for payment to the treasurer. In the treasurer's office a check and a voucher are typed up and thus the transaction is completed. In one plant, which was overburdened with clerical work, I succeeded in cutting the usual red tape by having the purchase order form consist of the following documents: purchase requisition, purchase order, receiving department notice with tissue file copies in each instance. The forms are distributed to the persons having authority to issue requisitions and the entire form is made up by these persons. The form *en toto* is sent to the purchasing agent for approval and issuance. This eliminates several steps. When part lot shipments are anticipated extra tissue copies are provided for the receiving clerk to serve as receiving slips. Thus all the records are made out at one crack. In this instance, sources of supply are known by the persons issuing the forms. In very large plants where frequent changes in supply sources and prices might be expected, a requisition clerk can be placed in the purchasing department to issue the forms upon telephonic notice from persons in authority. An approved copy of the requisition would be returned to the originator for his follow up file. But all requisitions, purchase orders, file copies, receiving records and receiving tickets could thus be made up at one time. Now add a check and voucher form to the purchase order form and a whale of a lot of extra clerical duplication and typing can be avoided.

Anything that reduces clerical work in a factory is all to the good. We all manufacture too damn many records and since Uncle Sam is adding to our record production enormously, we ought to strive to reduce our own clerical work. We can't very well tell Uncle Sam to go to hell, because he'd send us five more complex questionnaires on which to state our reasons.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SPRAY DRYING

In previous comments methods of spray drying were discussed. It was pointed out that the method would probably limit itself to non-volatile extracts because of the formidable difficulty of recovering from an air or gas stream, alcohol or other volatile solvents without the employment of sub-zero refrigeration or absorption towers. It is even a moot point as to whether absorption towers can be obtained which will adsorb solvents other than water from an air stream. But no one can say that anything is impossible these days. However, even if such recovery devices could be obtained the process because of the expense of the equipment would limit itself to products dealt with in larger volumes than those common to this industry. In a previous comment mention was made of a laboratory size spray dryer manufactured by the Bowen Research Corp., of Garfield, N. J. which apparently would lend itself to the scale of production commonly found in our industry. Another laboratory size unit has come to light in England and I am quoting below the paper published by Kenneth Bullock and J. W. Lightbown of the Department of Pharmacy of the University of Manchester. It is to be regretted that the transcript which came into my hands does not give the name of the scientific publication in which the paper appeared but I suppose it was the British Journal of Pharmacy.

Spray-drying dates back to 1872 when Percy[1] took out a patent in America for "a method of atomizing and desiccating fluid and solid substances, also any viscous substance containing water by use of dried, heated or cooled, air or gas, which forces the substance into atoms; the atoms are thrown forward and forced into a chamber and dried, in consequence of the dried and heated air which propels them into the chamber and also owing to the dried and heated state of the chamber into which they are thrown."

Stauf,[2] of Posen, Germany, patented an improved dryer in 1901, and specifically mentioned the drying of milk and blood. In this process the liquid was atomized in pressure jets at the bottom of the drying chamber into an upward current of hot air. The air and powder then passed into settling chambers.

In the McLachlan process, introduced in 1905, the jets are at the top of the drying chamber and they discharge into a downward current of air; one chamber suffices for drying and collecting the powder.

In the Merrell Soule process the spray and hot air enter the drying chamber at one side while the spent air leaves at the opposite side to enter a special dust-collecting box. The Rogers plant, introduced in 1917, has a large circular drying chamber. Pressure nozzles are located on all sides about 4 feet from the top and they spray towards the center. The bulk of the powder falls through an ascending hot air current. This counter flow system, it is claimed, results in a powder of low moisture content. The exhaust air escaping at the top of the drying chamber passes to separating vaults equipped with cloth filter bags.

In the Gray Jensen process air enters the drying chamber tangentially, setting up a cyclone effect which results in an improved separation of the powder.

The stationary pressure sprays may be replaced by rotary sprays. In the latter the liquid is fed on to a rotating surface and is flung off at the periphery in the form of a thin film which breaks up into a fine spray. The rotary spray was introduced by the Kraus patent[3] in 1912 and used in conjunction with an upward current of air. In the Dick process the milk is atomized by means of a revolving disk located at the center of the drying chamber near the top. Part of the hot air enters the drying chamber at the top to mix with the spray, while another portion enters lower down to complete the desiccation. A bell-shaped form of rotor is used in the Kestner spray-dryers. The advantage of the rotary spray is that there are no nozzles to block up or wear away so that even suspensions may be dried without difficulty. For drying serum or other products which must be maintained in a sterile state there is the formidable difficulty of maintaining a rapidly rotating axle in a sterile condition.

The Plant Used—For use in experimental pharmacy the great disadvantage of these dryers was their large size. The lowest quotation which we were able to obtain in 1940 for an experimental dryer was four times as much as the cost of the plant described below. Not only was there the question of cost but in such a large plant several gallons of material are required for a run and, at the rate with the rotary sprays, precondensation to 15 to 20 per cent. of solids is almost a necessity.

A great advance was made when, in 1940, Waite[4] described a small, relatively inexpensive spray-dryer capable of drying small quantities of liquid. This plant,

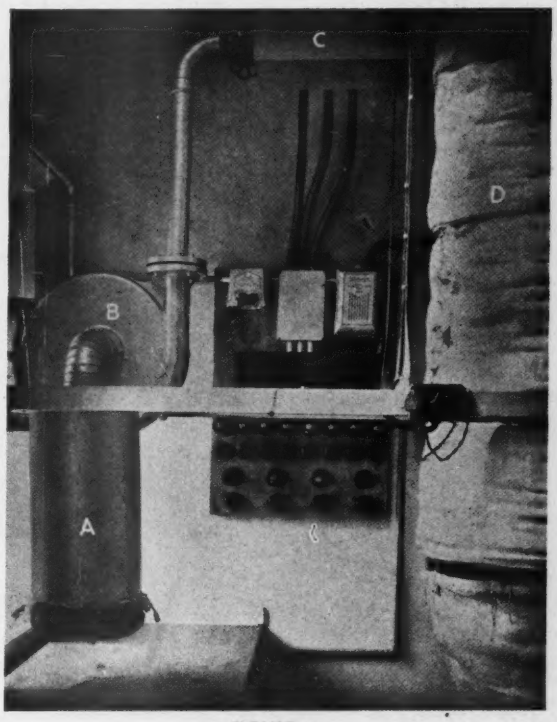

FIGURE 1

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somewhat elaborated and improved for the drying of blood plasma and serum, has been erected in this department and used for the experiments described below. The design and operation of the plant for the drying of blood plasma and serum has been fully described by Wilkinson, Bullock and Cowen[5] and need not be repeated here. For the drying of infusions and extracts the sterilization of the plant can be omitted. Photographs are shown in Figures 1, 2 and 3. Air is sucked through the textile bag located in A by means of the fan B and, after passing over the electric heaters in C, it is blown tangentially into the drying chamber D. The liquid to be dried is fed from the bottle E to the simple internal-type compressed air atomizer F, located at the top of the drying chamber. The spray mixes with the hot air (at a temperature of 80° to 100° C. in most of the experiments described below) and the resultant powder falls through the chamber, some of it being collected in the bottles G. The exhaust air containing the remainder of the powder is passed *via* the cyclone H through the textile bag in J. The separated powder falls into the bottles K. The warm, damp exhaust air is discharged from the room *via* a wide flue L. The drying chamber, cyclone, and jet are composed of Firth's F.D.P. "Staybrite" steel.

For an experimental run it is convenient to dry 0.5 to 1 litre of a solution containing 5 to 10 per cent. of solids. Much less material may however be dried. We have succeeded in drying liquid containing as little as 1 per cent. of solid matter without any precondensation. In the case of guinea pig serum, 60 mils of serum diluted to 120 mils with saline solution were successfully dried and sufficient powder obtained for the estimation of the contained compliment. On several occasions the muscle extract obtained from a single rabbit has been dried and the product used for enzyme estimations. With such biological fluids it is particularly advantageous to be able to avoid the heating associated with precondensation; the guinea pig serum, for example, was kept in a freezing mixture from the time of collection even while being fed to the dryer and so was ice-cold right up to the time of atomization. If any of the products are required in a sterile condition this can be attained by employing the full technique described by Wilkinson, Bullock and Cowen.[5]

Concentrated Infusions—In previous papers the preservation of concentrated infusions by means of heat, alcohol, and chemical preservatives has been discussed. Each of these methods has disadvantages, sterilized aqueous preparations become unstable if the container is unstoppered; chemical preservatives are suspect on grounds of undesirable pharmacological effects; while alcohol may be objected to firstly on account of its pharmacological action and, secondly, because it alters the solvent properties of the menstrum. While carrying out this work it has become more and more obvious that the ideal method of preservation would be desiccation. Doubtless the same idea has presented itself to others, but when the usual methods of drying, with or without reduced pressure, are attempted, instead of powders, soft or plastic residues are obtained. Such products are often only with difficulty redissolved. Spray-drying suggested itself several years ago, but it was only when the small plant described above was installed in this department that the experiments became possible.

Drying is conveniently carried out on our plant with a solution containing 5 to 10 per cent. of solids. We have not considered the *best* methods for extracting the various drugs; if spray-dried powders were adopted

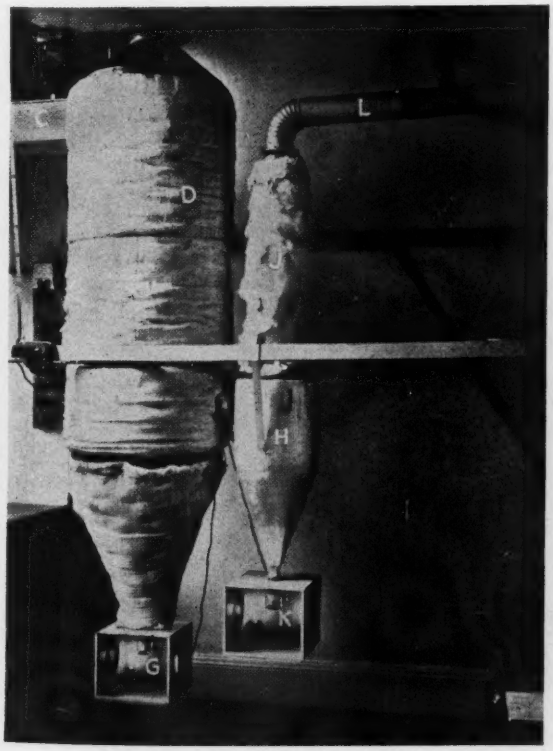

FIGURE 2

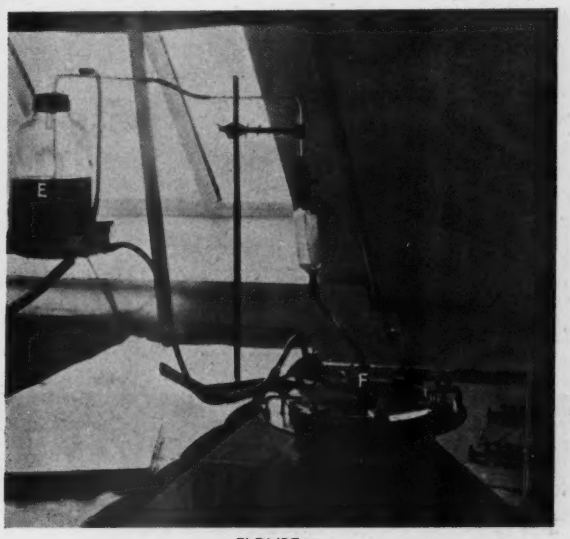

FIGURE 3

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F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

in pharmacy such methods would have to receive careful attention. Our efforts in this direction have been hampered by the fact that many of the drugs employed are now, due to war conditions, difficult to obtain. As might be expected, most of the powders are hygroscopic, but only the desiccated senega infusion possesses this property to such a degree as to make storage a problem.

In all cases it has been found that the powders obtained redissolve in water to give an extract as clear as the one originally fed to the dryer. Our difficulty has been to prepare aqueous extracts which were clear and bright at the time of drying, particularly with calumba and cascara. However, with perseverance this end has been attained, and then it has always been found that the resultant powder was completely soluble in cold water.

The solubility of a powder is tested by stirring 1 gm. of it with 50 mils of water. If the resultant solution is clear and bright the powder is described as completely soluble; if the solution is opalescent it is filtered through a Gooch crucible with a carefully prepared asbestos pad. If there is no residue after washing and drying, the powder is also said to be completely soluble—any residue is weighed and reported as the percentage of insoluble matter in the powder.

It must be pointed out that some of the fresh infusions of the British Pharmacopoeia are not clear solutions even when freshly prepared, particularly when cold. These, possibly colloidal suspensions, should not be filtered; obviously in such a case the dried solids would not redissolve to give a clear solution. By striving to obtain completely soluble powders our endeavor has simply been to show that during spray drying no soluble matter is rendered insoluble. In practice it might be desirable to produce a powder which reconstituted to an opalescent solution containing in suspension colloidal or finely divided matter derived from the drug.

Calumba—Two and a half lbs. of calumba in coarse powder was percolated with chloroform water so as to obtain an extract containing 5.4 per cent. of solids. This was spray-dried with air entering the dryer at 90° C. The resultant powder had a moisture content of 13.2 per cent. Exposed to the atmosphere during dry weather the moisture fell to 12.8 per cent., but when exposed in a thin layer during wet weather the powder took up moisture to form an adherent mass. It can be stored without deterioration in an ordinary stoppered bottle. The powder has been found to be completely soluble in water and a 0.24 per cent. solution is with difficulty distinguished from fresh infusion of calumba.

Quassia—Two and a half lbs. of quassia was percolated with chloroform water to exhaustion. Beginning with the most dilute portion, the percolate was evaporated to a total solids of 7.1 per cent.; 800 mils of product being obtained. This evaporation was carried out at atmospheric pressure, but it could, with advantage, be done under reduced pressure. A fine powder was obtained on spray-drying and some of the dust left in the machine could be brushed out after twenty-four hours, showing it to be not unmanageably hygroscopic. The moisture content of the powder was 9.8 per cent. On exposure to the air for a fortnight a further 9.6 per cent. of moisture was absorbed and the powder became a brown coherent mass. The powder, although hydroscopic, can be stored without alteration under ordinary conditions in a stoppered bottle; it is completely soluble and a 0.037 per cent. solution in cold water was practically indistinguishable from fresh infusion of quassia.

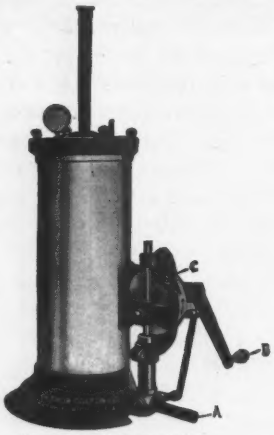
Senna—1.25 kgm. of broken senna pods was percolated with chloroform water to yield 2.5 litres of percolate having a total solids of 6.0 per cent. On spray-drying a satisfactory powder was obtained having a moisture content of 10.0 per cent. On exposure to the air for a fortnight the moisture rose to 12.1 per cent.; although the powder became adherent the mass was still brittle and easily fell to a powder again. It may be stored unaltered in a stoppered bottle under ordinary conditions. In the first experiment the percolate before drying was not clear and the resultant powder contained 0.35 per cent. of insoluble matter. A second quantity of percolate carefully clarified before drying yielded a powder completely soluble in cold water. A solution containing 2 per cent. of the spray-dried powder and 0.3 per cent. of strong tincture of ginger closely resembled fresh infusion of senna.

Senega—A concentrated infusion of senega containing 11.4 per cent. of total solids was made by the Pharmacopoeial process except that chloroform water was used in the place of dilute alcohol as menstruum; the product, as directed, being made just alkaline with ammonia. An excellent run was obtained on the dryer in spite of the sternutatory properties of the material. A very fine powder was obtained, due no doubt to the low surface tension of the liquid being sprayed; it contained 4.1 per cent. of moisture, but was extremely hygroscopic. Two samples stored in screw-capped bottles became sticky in the course of a few days even in dry weather. The product must be stored in a stoppered bottle in a desiccator when it remains a fine powder indefinitely; otherwise it may be stored in sealed glass tubes. The powder is completely soluble in water. A 1.3 per cent. solution closely resembled fresh infusion of senega but the odor of methyl salicylate was less marked.

Digitalis—A concentrated infusion of digitalis has been spray-dried to give a fine dry powder, the pharmacological activity of which is being investigated in the Department of Pharmacology. A full description of the work will be given later.

Gentian—Since compound infusion of gentian contains orange and lemon peel which contain volatile oil it has not been considered in detail. A powder obtained by spray-drying an aqueous extract of gentian is described under extract of gentian below, and a 0.6 per cent. solution of this powder flavored with tinctures of orange and lemon closely resembles fresh compound infusion of gentian.

(*To be continued*)



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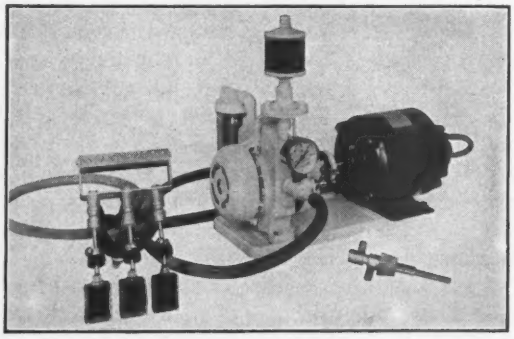

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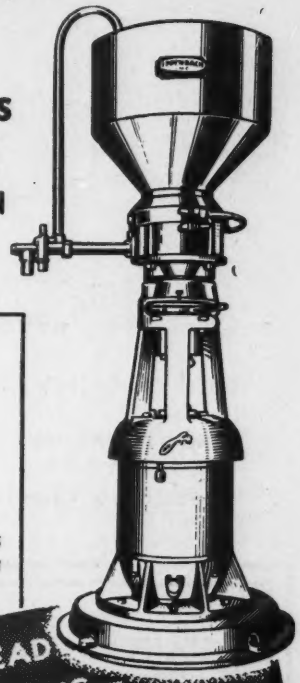

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First of all, we may take the case of zinc and titanium oxides. These are normally used for their covering power, whiteness, and absorbency plus adhesiveness; the desired properties being manifested in the order shown. For covering power, one of the modern and highly successful chalks may be used, together with a selected grade of kaolin. The essential whiteness of these metallic stearates will probably be lost, which is certainly a pity, because of the fact that a brilliant white pigment serves admirably to throw added colors into relief. Nevertheless, in view of the necessity for imparting skin-color shades to face powders, neither zinc nor titanium oxide need be regarded as indispensable.

If we examine the more readily obtainable raw materials, we find indeed that careful substitution will give us quite a satisfactory finished product. The ideal formula is still a matter of judicious balance—a fact that applies not only to face powders but to face creams, beauty milks, tooth pastes, and most other cosmetic and toilet preparations.

Thus the well-known English chalk, specially prepared for cosmetic use, has rapidly acquired popularity as a balanced combination of many different properties. It is, in briefest terms, a precipitated chalk of small particle (calcitic type) size, remarkably smooth and free-flowing; combining the smoothness and slip of talc with excellent adhesion and covering power; and above all, giving the peachy bloom which was hitherto considered the peculiar virtue of starch. Unlike talc, chalk may be used in high proportions without giving an unpleasant, glazed appearance on the skin. It is non-irritant, absorbent, free-flowing, and has the property of retaining perfume without deterioration (i. e. loss of freshness) or evaporation. Its whiteness tends to offset the omission of titanium dioxide, by bringing up coloring materials more brightly. Finally, it is available in three density grades, to facilitate texture control.

So far as English talc is concerned, it is worth noting that a London firm has fairly recently patented a process (British Patent No. 535,853) for the preparation of magnesium silicate, talcum and talc-like compounds from sea water or brine or other water which naturally contains magnesium ions. This water is said to be used as the starting material, the magnesium ions being extracted by precipitation with a soluble silicate. The precipitate is allowed to settle and the clear liquid decanted. The resultant magnesium silicate slurry is then washed, filtered and dried or washed and dried.

We now arrive at the final and important problem of ensuring adequate adhesiveness. The question of achieving the d e s i r e d density or "weight" has already been mentioned. Hitherto, face powder manufacturers have utilized, in order to make their powders cling effectively to the skin, one or more of the metallic stearates or a proprietary base consisting (frequently) of zinc myristinate or undecylenate. In future, it may be advisable or even essential to revert to the older method of incorporating a small proportion of a special fat basis, "corps de poudre" or "frettpuder" base— as used in face powder compacts and, of course, theatrical face powder. I would stress the fact that adhesiveness is of the utmost importance, particularly in these days when women users may easily have run out of their face cream foundation.

Only a minute proportion of fats, oils and/or waxes need be added to a face powder in order to ensure that it "clings." Excessive greasiness is obviously undesirable, as is also any tendency towards rancidity development. Another point that must be watched is the even distribution of the fat basis throughout the entire batch. This latter effect may be achieved best by dissolving the fat (e.g., lanolin in ether or benzol) and then milling it intimately into a portion of the batch, which is subsequently worked up with the rest. With certain fat bases, the somewhat difficult business of dissolving may be omitted.

The following constituents of fat bases have been suggested: lanolin, lanolin absorption base, wool wax, cetyl alcohol, spermaceti, stearic acid, mineral oil, mineral-oil type cold cream, ceresin, technical glyceryl monostearate and technical diglycol stearate. The proportion incorporated in face powder varies between 0.1 and 3 per cent., according to the constitution of the powder and the actual fats, etc., employed. *Joseph M. Vallance, Soap, Perfumery, Cosmetics.*

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ISOPROPYL ALCOHOL PEROXIDES

While it is a widely known fact that ethyl ether, isopropyl ether, and dioxane readily form peroxides when stored in contact with air or oxygen, there seems to be no mention of the formation of peroxides in isopropanol when stored under similar conditions.

A sample of 99.5% isopropanol, which had been stored for many months in strong daylight in a clear glass bottle only about one-third filled, was observed to have a strong unpleasant odor. Since this odor greatly resembled the odor of isopropyl ether when it is badly contaminated with peroxides, the isopropanol was investigated for the presence of peroxides.

Quantitative iodometric determinations were made of the peroxide content of all samples of isopropanol available with the results shown in the table.

Sample	*Peroxide, mole/1.*	*Conditions of Storage*
1	0.36	Clear glass bottle, 1/3 full, strong light
2	.13	Clear glass bottle, 2/3 full, strong light
3	.04	Clear glass bottle, 1/3 full, strong light
4	.05	Clear glass bottle, 2/3 full, strong light
5	.003	Tin can, nearly full, dark
6	.007	Redistilled, stored about four years, largely in the dark.

This reaction appears, in part, to be a photochemical process. The following brief experiment was designed to indicate the comparatively rapid rate of formation of peroxide in strong light. Twenty-five ml. of isopropanol was placed in a 500-ml. Pyrex glass flask fitted with a capillary tube to equalize external and internal pressure. The flask was left on the roof in full daylight for two days. Initial peroxide content 0.003 mole/1; after two days 0.026 mole/1.

These data are presented to call the attention of experimenters to the need for making sure that isopropanol is peroxide free when working with easily oxidizable material. *C. E. Redemen, J.A.C.S. vol. 64, p. 3049.*

DETERMINING VITAMIN C

Vitamin C as a moderately strong reducing agent is capable of producing colored reduction products from a number of the phospho- and silico- molybdates and tungstates. One of these reactions has been adapted by Brand and Kassell to a quantitative determination of the vitamin. Another, which offers certain advantages under suitable conditions, is the reaction between vitamin C and silicomolybdic acid produced by the reaction of ammonium molybdate and sodium silicate in acid solution. The reaction is sensitive, 0.01 mg. of the vitamin in 50 ml. of solution producing a discernible color; the reagent is stable and can be kept for long periods; and the blue reduction product is not re-oxidized by exposure to air. In the procedure described, using the photoelectric colorimeter, natural coloring matter in the yellow and red part of the spectrum does not interfere with the test.

The method described is suitable for determining the vitamin C content of fruits, vegetables, and other materials in which the content of other reducing substances is low—e. g., bananas and lemon juice. In other materials it gives results more nearly comparable to the iodine titration and therefore tends to run higher than the indophenol method. The molybdate reagent is easily reduced by ferrous and stannous ions and more slowly by cysteine, sulfites, and thiosulfates. *M. L. Isaacs, Ind. Eng. Chem. vol. 14, p. 948.*

VITAMINS AND COLDS

A controlled study yields no indication that either large doses of vitamin C alone or large doses of vitamins A, B_1, B_2, C and D and nicotinic acid have any important effect on the number or severity of infections of the upper respiratory tract when administered to young adults who presumably are already on a reasonably adequate diet. *Cowan et al. J.A.M.A. vol. 120, p. 1268.*

VITAMIN C IN PERSIMMON

Prof. C. G. Vinson of the University of Missouri and Prof. F. B. Cross of Oklahoma A. and M. College report (*Science*, Nov. 6), that green persimmon leaves are rich in vitamin C. Freshly dried leaves sometimes have an even higher concentration. Green fruits also contain the vitamin, though not as much of it as the leaves; the vitamin apparently disappears to a large extent as the fruit ripens.

Tea made from chopped-up dried leaves was found to be a good vitamin source, and tasted rather well with a little sugar—"similar to sassafras tea." Real tea was also tested, but proved to have only about one per cent as much vitamin C as the decoction from persimmon leaves.

SKIN ABSORPTION

Drs. Franz Herrmann, Marion B. Sulzberger and Rudolf L. Beer describe in *Science* a whole series of compounds which can be applied externally and which they dub "penetrasols." The compound that penetrated most rapidly and deeply contains antipyrine, xylene and some sulfonated wetting agents. The penetrasols are carriers of the actual medicines, such as the sulfa drugs.

TITANIUM COLOR LAKES

According to Hancock and Stevens (*J. Oil Col. Chem. Assoc.*), acid dyes which are usually precipitated by barium chloride can also be precipitated by partly neutralized solutions of titanium oxychlorides. In brightness and fastness, the resulting lakes were found to compare favorably with the corresponding barium lakes. An even better precipitating agent is titanium glycerochloride, obtained by adding glycerin to the precipitating solution or titanium tetrachloride to aqueous glycerin. This, apparently, is capable of precipitating all sulfonated dyes, including those not precipitated by barium chloride. The resulting lakes are relatively soft, and in many instances have greater color strength, fastness and resistance to chemical reagents than barium lakes.

In wartime this investigation is not likely to be essayed, but the question of the utilization of titanium lakes in cosmetics seems worth noting as a subject deserving of study. Although barium lakes are permitted for use for the purpose both in England and the United States, there is still strong opposition to their employment in some quarters. Presumably, owing to their resistance to chemical reagents, and the known inertness of titanium dioxide, the new titanium lakes would be devoid of all toxic or irritant properties.

MOLD PREVENTION

Canadian experiments have shown that sodium propionate retards mold in wartime bread made from a flour containing larger amounts of wheat germ than the white flour normally used. The chemical does not alter the flavor, quality, or appearance of the bread. Tests have shown that mold in butter and cheese is retarded when wrappers are impregnated with sodium propionate. *Chem. Eng. News, Dec. 10, 1942.*

GLYCERIN SUBSTITUTE

A preparation, glycerogen, which is 40 to 42 per cent. of glycerin, 15 to 25 per cent. of propylene glycol, 20 to 30 per cent. of mannitol and sorbitol, 6 per cent. of water and 1 to 4 per cent. of dihydric alcohols, was found to be a promising substitute for glycerin. This product was prepared by reduction of glucose, sorbitol, starch, cellulose, peat, straw or sawdust. The reaction of glycerogen was *p*H 8.4 to 8.5, and if necessary the material can be neutralized with phosphoric acid. *C. Bauschinger, Fette u. Seifen, 1941, vol. 48 p. 126.*

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for this young fellow's tender skin
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Over 40 years ago, the first Neutral Powdered White Soap was introduced to the manufacture of cosmetics and proprietary remedies by the House of Hopkins. Though perfected through the years by various technical improvements, Hopkins' Rajah Brand Neutral Powdered White Soap is today made *under the same original formula and process.* Not one, but many, qualities account for this remarkable fact. For example, Hopkins' Neutral Powdered White Soap gives you—

- *extreme snow-whiteness*
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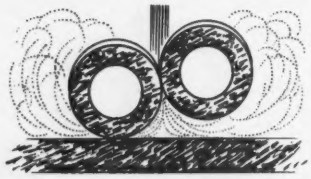

To insure against discoloration and rancidity which usually develop from excessive heat in the process of milling, Hopkins' Neutral Powdered White Soap is milled between slow geared chasers (only 70 rpm). This method is slower and more painstaking, yet our prices compare favorably with lesser qualities, due to our large production.

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SYNTHETIC MENTHOLS

The menthol isomers possess distinctly differing tastes and smells which are extremely difficult to describe, although no difference, unless it is that of intensity, is noticeable between the optically active and inactive forms of the same isomer. Bliss and Glass described the smell of three of them in the following manner:—*d-neo*-Menthol, slightly musty and choking; *d-iso*-menthol, very faint camphor; *l*-menthol, clean, lifting odor of the mint plant: while Macht's description was *d-neo*-menthol, very sharp and irritating; *d-iso*-menthol, little odor of any kind, but resembling camphor.

From the pharmacological standpoint the smell may be of less importance than the taste. Solutions were tasted by a representative group of people who were asked to describe the tastes in their own words. The results showed a much closer agreement than was expected, and it was agreed that both *neo*-menthol and *iso*-menthol were unpleasant and slightly burning. To describe both taste and smell of the *neo*-menthol, words such as dank, earthy, fusty, mouldy, were used. Most agreed it was very slightly bitter, and a few also thought, slightly salty. A very slight cooling effect after some delay was also reported, and none found the taste to be persistent. *iso*-Menthol was described in the following terms—musty, stale, mildew-like, hay or vegetable-like, distinctly bitter. The taste was found to be persistent and could be detected thirty minutes later in one instance; none noticed any cooling effect whatever. *neo-iso*-Menthol was classed as somewhat between the two, with a relatively non-persistent taste. *dl*-Menthol was, of course, more familiar, and thus it was less easy to obtain an original descriptive opinion. All referred to it as peppermint-like, coupled with words such as clean, refreshing, and cooling.

The influence of one isomer on the taste of another was also examined. The outstanding feature of these experiments was the over-powering effect of *iso*-menthol; as little as 1 per cent. could be detected in menthol, definitely spoiling the clean taste and leaving as an after-taste an unpleasant stale flavor, although not interfering noticeably with the cooling effect. When *neo*-menthol was mixed with menthol, the effect was far less obvious; 5 per cent. could just be detected, but no stale after flavor was noticeable. As much as 20 per cent. could be present before the unpleasant taste really obtruded itself. *W. E. Huggett, Quart. J. Pharm. Pharmacal.*

EUCALYPTUS OIL

With a view to exploiting the essential oil content of the Eucalyptus globulus from the forests of La Plata, a detailed investigation has been recently carried out by L. P. Ponce. The foliage oil is of principal interest and is readily isolated by steam distillation of the freshly gathered and finely chopped leaves. The yield is 2.75% to 3%, and the eucalyptol content of 76% to 78% compares favorably with the 70% present in the foliage oil of Eucalyptus Australiana (from various parts of Victoria) as reported by Penfold and Morrison in 1938 (*F. Proc. Roy. Soc. N. S. W., 71 p. 357*). Although the oil yield from the flowers of Eucalyptus globulus is about the same as from the foliage, its eucalyptol content is only about 46%, this difference being clearly reflected in the much lower solubility of the foliage oil in ethyl alcohol.

The physical constants of the oil, as given by Ponce, are density (20°C.) 0.93 and refractive index 1.457 (conditions not specified). Chemical examination revealed the presence of numerous compounds, mainly of an alcoholic character including geraniol, linalol, globulol and nerol. The total alcohol content is estimated to be 18.3%, of which 6.2% is in combined form. Aldehydes are also present to the extent of about 3%.

ISOPROPYL ALCOHOL

Isopropyl alcohol is not only a satisfactory replacement for ethyl alcohol in many of its uses, but it is actually superior in certain regards, being more antiseptic and bactericidal against many organisms. It also has the advantage of lower surface tension and a greater fat solvent action than ethyl alcohol. Of pointed interest just now is the fact that isopropyl alcohol is obtained as a product of the petroleum industry by the absorption of olefin gases containing propylene in sulfuric acid, and hydrolyzing the resulting sulfuric acid esters; thus particularly critical materials are not involved.

Isopropyl alcohol is suitable for purposes of rubbing compounds, the following formula having been used for several years by the University Hospital, of the University of Michigan, as a Back Lotion:

Isopropyl alcohol	25.0
Glycerin	10.0
Acetic acid, 4 per cent	2.5
Water, *q. s.*	100.0

Coloring and perfume may be added.

It has also been used at the University Hospital to replace ethyl alcohol in Tincture of Green Soap and Solution of Coal Tar, and it would undoubtedly be acceptable in such external preparations

ARE the synthetics you're using entirely satisfactory? . . . or are they emergency creations, developed in haste, and of materials, perhaps, unadapted to the rigid demands of fine perfuming? Are they stable, dependable and fully suited to your present needs?

If not, your examination of the accompanying lists of FRITZBRO SYNTHETIC FLOWER OILS and SPECIALTIES may reveal some likely substitutes. All are time-proven reproductions, created by our perfumers in the relative leisure of pre-war years, when *months* of patient study, rather than *days* of frantic haste, served to endow our products with the beauty and lifelike fidelity for which they are noted. Only in the occasional substitution of newly developed and improved constituents do these differ from the original formulas in any way. Otherwise, they represent a union of natural flower extracts and the newest and finest aromatic chemicals, combined with skill and meticulous care to produce a modern group of synthetic specialties ideally suited to your current needs.

Look over these lists and if you see any items adaptable to your formulas, write us on your letterhead and we'll gladly send you samples for examination and comparison with the materials you now employ.

FRITZBRO SYNTHETIC FLOWER OILS

These compositions contain strong backings of natural oils and closely duplicate the odor of the respective odors of the living flowers. We offer them, not as finished perfumes requiring merely alcoholic dilution, but as compositions to replace, or to partly replace, the more costly natural oils. They make possible the fashioning and blending of fine, rich floral creations at really moderate cost.

APPLE BLOSSOM
Simulates the sweet, delicate fragrance of apple blossoms. Excellent base for floral bouquets, fancy bouquets and powder perfumes.

CARNATION
A modern version of carnation perfume.

PURPLE CARNATION
A different nuance of carnation, possessing a deep, warm tonality.

GARDENIA
Imparts the subtle sweetness of living gardenia. An interesting and very useful base.

HONEYSUCKLE
Possesses the elusive odor of honeysuckle flowers.

JASMINE EXTRA FINE
Reproduces closely the fragrance of the living flower. An economical substitute for the natural oil.

SWEET LILAC
Suggests the sweet freshness of lilac blossoms.

LILY OF THE VALLEY
Closely resembles the odor of the living flower. An excellent base for Muguet.

LINDEN BLOSSOM
Also known as tilleul. Intensely sweet and deep; one of the most valuable blending agents.

MAY BLOSSOM
A basis for lily of the valley perfumes. Used for sweetening other perfumes.

MIMOSA
Embodies the sweet, delicate fragrance of the living flower. Has excellent possibilities for the perfumer.

NARCISSUS
A union of natural flower extracts with the aromatic chemical constituents found in the flower.

NEROLI
Closely approximates the odor of neroli bigarade petale.

ORANGE FLOWERS and ORANGE FLOWERS TERPENELESS
These are delightful reproductions of the natural concrete which they replace to good advantage and with considerable saving in cost. Orange Flowers Terpeneless is valuable in preparations where solubility in low proof alcohol is a requisite.

ROSE OTTO
Excellent substitute for genuine Rose Kazanlik.

ROSE, RED
A superlative red rose character, unequaled for strength and quality.

WHITE ROSE
Intensely sweet and floral.

TUBEROSE, EXTRA FINE
TUBEROSE, PROVENCE
May be used very effectively for blending with or replacing the costly absolute.

VIOLET (Parma Type)
VIOLET (Victoria Type)
VIOLET DE PARME
These bases are unequaled for fine perfume work, effectively replacing the natural concretes and absolutes. They contain natural extractions from the flowers.

WISTARIA
An excellent reproduction of this delightfully fragrant odor.

YLANG YLANG
A good substitute for high grade natural oils.

FRITZBRO SPECIALTIES

This group consists of perfume bases developed in our laboratories and thoroughly tested by practical commercial use. They are primarily for the perfumer who desires to impart a higher degree of originality and distinction to his own compositions. Each Specialty has been designed for use either as a base or as an adjunct for improving the odor of the finished goods.

ACINTHIA

Hyacinth—remarkably true and plant-like. This exquisite odor will find its way into many delightful perfumes.

AVRYLLIS "A"
AVRYLLIS "B"
AVRYLLIS "C"

These embody the true fragrance of living lilac. They are lasting, non-staining and possess a deep intensity of tone which makes their use a matter of real economy in products based upon this popular floral note. Offered in three grades, slightly modified according to price.

COLOGNE #20

Represents the straight citrus type cologne. The finished preparation is on a par with leading European brands.

ENFLEUR

This delightful specialty embodies the mingled perfumes of many flowers—the spiciness of dianthus and carnation, the depth and stability of rose and the unfailing appeal of lilac.

HELIOTROPE FLEURS CONCRETE

Distinguished from the ordinary synthetic by its living, plant-like character and by its greater odor value and solubility. Has a slight tendency to discolor. Intensifies and fixes perfumes and thus assures fuller, richer and more flowery effects.

JASOLEA "N"

A remarkable simulation of jasmine by enfleurage, even to its duplication of the obscure fatty odors of the natural oil. This is a compounding achievement of the highest order.

JASOLEA "X"

Duplicates precisely the jasmine absolute of volatile extraction. It blends perfectly with the natural essences and, in correct proportion, defies even expert detection.

JASOLEA "F"

A finished perfume specialty possessing all the fragrance of the living flower. An indispensable working base for jasmine perfumes. Its use necessitates little if any manipulation.

LYLIUM "A"

This lily of the valley is strongly backed with natural flower extractions, and provides a delightful reproduction of a Muguet base.

LYLIUM "B"

Priced somewhat lower, this lily of the valley is a "made to order" odor for all-around use in creams, toilet waters, lotions, powders and general cosmetic work.

LYLIUM "C"

Lacking somewhat the intensity of the other two grades, this represents an exceptional odor value for perfume and cosmetic preparations in which low cost is an essential consideration.

ABSOLUTE OAK MOSS BODY

This specialty has about the same strength as the absolute of oak moss and will replace it effectively. It is light in color.

OPOPANAX

Imparts a soft, sweet, pleasantly subdued oriental effect. Lends top-note and "lift" to other compounds and provides complete fixation without further addition of any kind.

CARNATION ALPHA

A deep, spicy note useful in carnation perfumes.

ROSALDEHYDE

Powerful rose leaf character.

SAXON MOSS

An oak moss specialty for toning and sweetening other perfumes.

OBJECTIVES FOR '43

FROM the realm of hopes and objectives for 1943, the following are but a few of the many deserving our support in the long year of uncertainty that lies ahead:

For our industry: Greater ingenuity in adapting its skills and facilities to the war effort.

For all industry: Fewer accidents to impede production; last year they cost us 480,000,000 man-days of industrial production.

For big business: Much needed relief from the growing flood of government questionnaires, complicated data forms and non-essential red tape.

For little business: The courage and determination to keep going . . . until the boys come marching home. We'll need little business then!

For the public: Well planned rationing . . . accepted with a smile—and more money for War Bonds.

For the individual: Pay-as-you-go taxes . . . commencing *this* March 15th!

For the United Nations: Victory in '43.

For all the world: Peace, plenty and happiness . . . without end.

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BACKGROUND VALUES . . . a PART of the product, APART from th

A good product deserves a good package; accuracy and care in our bottling department contribute to the customer's satisfaction at the delivery end of an order. Above: Operators applying our exclusive, tamper-proof top. Left: In our packing and shipping departments, skilled hands and expert direction enable us to dispatch hundreds of orders daily without mishap. Right: This truck pit, providing street level conditions twelve stories up, is an indispensable factor in our long record of prompt deliveries.

DELIVERING the goods *on time*, these days, is something of an achievement, yet that is what we have been doing, with very few exceptions, ever since the present emergency began. To those who have dealt with us year after year, this record is not surprising, for these customers have come to know that accuracy and promptness in the filling and delivering of orders are characteristic of Fritzsche service. To make this policy effective, it is only natural that we have had to evolve a system of careful coordination and efficiency in all departments concerned with the handling of orders. Getting our products delivered, therefore, in the face of—and in spite of—present difficulties, does not constitute an altogether new or insurmountable problem. Given fair cooperation by our customers in anticipating their needs somewhat in advance, our packing, shipping and traffic departments can be counted upon to deliver the goods *when* wanted, *where* wanted and *as* wanted . . . and that means precisely *on time!*

Incidentally, this dependable service adds not a penny to your cost . . . it's all a part of Fritzsche product APART from the price! May we send you our catalog?

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BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

as scalp tonics, Chloroform Liniment, Tincture of Larkspur, Spirit of Camphor, Tincture of Benzoin and Bay Rum. Such preparations, however, could not be designated by official titles as they vary from the official formulas.

Isopropyl alcohol has been found, on animals, to be about twice as toxic as ethyl alcohol, and little work has been done on its use in preparations intended for internal use. Studies in England, however, have found it suitable as a menstruum and solvent for preparations in which it is completely evaporated during manufacture.

Isopropyl alcohol is used today in many hospitals as a surgical antiseptic and disinfectant. At the University Hospital, University of Michigan, a 50 per cent solution, colored red, is used for preoperative preparation by the surgeon and also on the field of operation. Some investigators have ranked isopropyl alcohol ahead of ethyl alcohol as a disinfectant for the hands.

Isopropyl alcohol can be used for the soaking of previously cleansed and sterilized surgical instruments and, since it is said not to affect the potency of insulin, it is used as a disinfecting agent in connection with the administration of this drug. The maximum bactericidal concentration of isopropyl alcohol has been stated to be full strength, 98 to 99 per cent, and the lower water content as compared to 70 per cent ethyl alcohol rendering instruments less liable to corrosion.

BURN TREATMENT

Hardin used cod liver oil for the treatment of 346 various types of wounds and burns. Healing was more rapid than that following other methods. Cod liver oil is so effective in cleaning up infected wounds and stimulating healing that it replaces diluted solution of sodium hypochlorite. It is an effective method for treating the most severe major burns and is superior in certain respects to other methods of local therapy, especially in third degree burns in which cod liver oil reduces infection, forms no adherent coagulum, destroys no epithelial elements and minimizes skin grafting. Commercial ointments were superior to home made preparations, in which odor, the only real disadvantage of the therapy, is disagreeable. *So. Surgeon, vol. 11, p. 691.*

AMPHETAMINE SULFATE FOR MIGRAINE

Results with amphetamine sulfate in migraine, as presented by Gottlieb, suggest that the drug may be useful in the treatment of this disease. Amphetamine sulfate was selected because it is a sympathomimetic compound with a prolonged action and because vasoconstriction with its concomitant pressor effects was desired. As the drug can also produce intense restlessness, insomnia and cardiac irregularity, depending on idiosyncrasy, it is contraindicted for patient with cardiovascular disease, particularly those with hypertension. It must be administered with due caution. The drug was given to 25 patients suffering from typical migraine but free from other disease. Eighteen of the patients received amphetamine sulfate intravenously from one to seven times and 12 of them consistently obtained complete relief from attacks in from seven to forty-five minutes. Three of the 12 on some occasions had a recurrence of symptoms after four hours. These subsequent symptoms were relieved by further intravenous medication. Of the 6 who failed to obtain relief, 2 did so regularly from ergotamine tartrate, 1 from oxygen therapy and the other 3 failed to respond to any therapy. Of the 7 on oral therapy 5 were improved within sixty minutes and 2 were not. In contrast to these 25 patients with mild and infrequent paroxysms were 3 who had frequent severe attacks. They responded well to amphetamine sulfate when it was given intravenously. As the frequency of their paroxysms was a serious problem, the drug was tried orally in divided doses as a prophylactic agent. A maintenance dose which relieved them of their paroxysms, yet was not sufficient to cause toxic manifestations, was found for each of the 3. *Am. J. Med. Sci. vol. 204, p. 553.*

HEPARIN FOR THROMBOSIS

Bauer employed heparin as a therapeutic rather than a prophylactic measure in thrombosis. He maintains that the drug should be withheld until thrombosis is definitely established. To insure early diagnosis he resorts to venography, which makes it possible to demonstrate the first manifestations of the condition in the lower leg. As soon as the diagnosis is established, heparin is given in large doses. The disease generally follows an abortive course. The author gives an account of all the cases of certain or of suspected thrombosis admitted to his hospital during the period from Oct. 1, 1940 to Sept. 30, 1941. Thirty-eight cases were diagnosed when the thrombotic process was still localized to the lower leg. They were treated with heparin, generally 100 mg. three times daily for from three to five days, the total dosage averaging just over 1,100 mg. There were no deaths and no complications. The average length of time in bed after the beginning of the treatment was only 6.4 days. Thirteen cases were not seen until the thrombotic process had spread to the thigh. The doses here were somewhat larger than in the former group, the total averaging 1,540 mg. There was one death, due to pulmonary embolism. The average time in bed was 7.3 days. In 6 out of 72 examinations venography did not decide with certainty whether thrombosis was present or not. These patients were treated with heparin, developed no complications, and were able to leave bed in a few days. In 15 cases clinical suspicion of thrombosis was ruled out by a definitely negative venogram. These patients received no heparin and were allowed to get up immediately. No signs of thrombosis manifested themselves later. By the use of heparin the treatment time for patients suffering from thrombosis was reduced to about one-seventh that usually required. Mortality from thrombosis was greatly reduced and subsequent serious invalidism will probably be much decreased. *Acta Chirurgica, Scand. vol. 86, p. 267.*

VITAMIN K AND ABORTION

Possibility that vitamin K may play a role in some cases of abortion is suggested by research results discussed in *Nutrition Reviews* (November). The research was conducted by Drs. Robert A. Moore and Mary L. Miller of St. Louis, Isabelle Bittinger, of New York, and Louis M. Hellman of Baltimore.

Although this function of vitamin K has not yet been shown in humans, experiments with rabbits insufficiently supplied with vitamin K invariably resulted in abortion. All test animals had previously given birth to normal litters. Control animals receiving the same diet, but including vitamin K, continued to have normal births.

Internal hemorrhage of a type occurring in premature delivery in humans, was observed by miscroscopic examinations of tissue from the test animals.

Abortions resulted, it is concluded, from lack of the precursor to the clotting factor in the blood, called prothrombin —a condition associated with vitamin K deficiency. *Science News Letter.*

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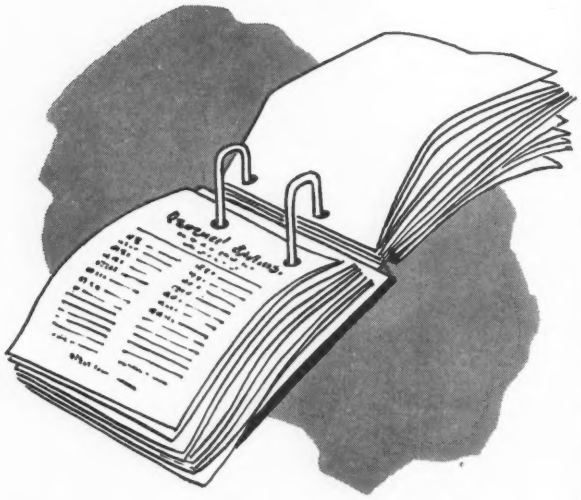

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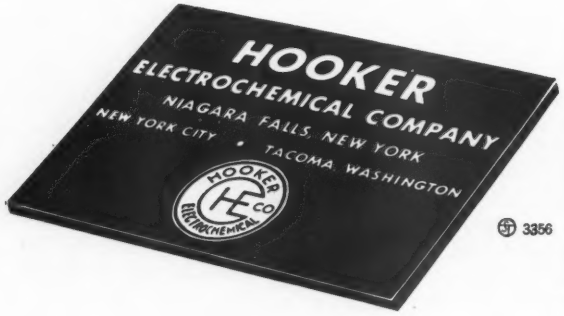

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The 2% solution of 2-amino-heptane sulfate produces approximately the same effect on the nasal mucosa as 1:1,000 epinephrine. The 2% solution and even a 1% solution of 2-amino-heptane sulfate produces a greater constriction and more pronounced ischemia than 2% isotonic aqueous ephedrine sulfate solution. The 0.5% solution of 2-amino-heptane sulfate approximates in effect the 2% ephedrine sulfate solution.

Even in concentrations up to 4%, and in solutions approximating isotonicity, 2-amino-heptane sulfate has no deleterious effect upon cilia of the upper respiratory tract when applied for periods customary to clinical practice.

Following application of 2-amino-heptane sulfate there is a notable absence of local tingling and of subsequent systemic reactions such as tremor, excitement, or insomnia. Furthermore, there is no subsequent vasodilatation blocking the nose; patients who have used other vasoconstrictors in fact spontaneously mention the absence of this reaction following use of 2-amino-heptane sulfate.

Introduced into the sinuses by the displacement method, 0.2% solution of 2-amino-heptane sulfate is effective and well tolerated.

Isotonic solution of 2-amino-heptane sulfate may be prepared as follows:

2-amino-heptane sulfate	2.0 Gm.
Sodium chloride	0.406 Gm.
Distilled water, q.s.	100.0 Gm.

Dilutions may be made as required with 0.9% sodium chloride solution. The pH of a 2% solution of 2-amino-heptane sulfate has been determined to be 5.7. *A. W. Proetz, Ann. Otol. Rhin. Laryn. vol. 51, p. 112.*

BONE HEALING

Sperling and his associates investigated the effect of intravenous injections of sodium-beta-glycerol-phosphate on the rate that fresh experimental fractures in rabbits healed. Twenty-seven animals received six to fourteen daily injections, by ear vein, of 0.1 Gm. of the drug in 4 cc. of solution. Twenty-two control animals with similar fractures were given injections of isotonic solution of sodium chloride. All rabbits were killed the day following the last injection. Roentgenograms of the limbs were taken before and after soft tissue was removed from them; they revealed an increase in callus about the fracture site in the group treated with sodium-beta-glycerol-phosphate. Also the callus was more firm to palpation than that of the control animals. Healing appeared to have progressed further than in the control animals, the callus was larger, the fracture defect was more nearly bridged over and much more callus was adherent to the periosteum. *J. Bone Joint Surg. vol. 24, p. 781.*

SKIN ABSORPTION OF VITAMIN K

Conventional methods of administering vitamin K to the newborn infant are not ideal, because of the possibility of lipid pneumonia from oily solutions administered orally and encapsulation of the oily depot when injected parenterally. Vollmer and his collaborators tried percutaneous administration of concentrations of 0.01 to 1 per cent. of menadione in eighty parts of liquid petrolatum and twenty parts of odorless kerosene. An exactly determined amount of the vitamin-oil mixture, usually 0.1 cc., was applied to the chest of the infant and distributed over the skin. Doses of 1 or 0.1 mg. of menadione administered percutaneously during the first day of life were effective in preventing physiologic prothrombinopenia. A dose of 0.01 mg. percutaneously was effective in some infants and ineffective in others, while the same amount in sesame oil orally proved fully effective. Therefore, quantitatively more vitamin K is absorbed through the intestinal wall than through the skin. The speed of percutaneous absorption does not seem to be inferior to that of intestinal absorption and is probably superior to intramuscular absorption. In 1 newborn infant with clinical hemorrhagic disease and a prothrombin time of more than four minutes the bleeding ceased after four hours and the prothrombin time became normal six hours after the percutaneous administration of 1 mg. of menadione. Prothrombinopenia was prevented in infants whose mothers received 1 or 2 mg. of menadione percutaneously two to fifteen hours before delivery. Every infant should receive vitamin K im-

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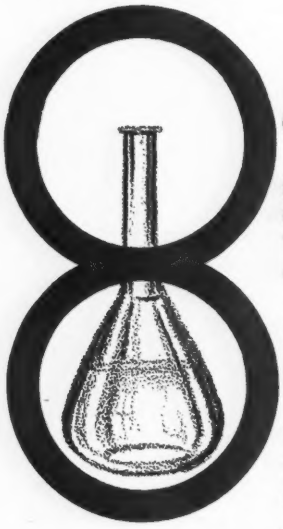

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mediately after birth, whether the mother did or did not receive it. Since 1 mg. of vitamin K is about one hundred times the minimal requirement, it will be effective even when carelessly applied to the infant's skin. As hemorrhagic disease of the newborn is relatively rare and an intramuscular injection to every infant seems to be a too drastic step in dealing with such a remote risk, the simplicity of percutaneous administration may well render this valuable preventive measure acceptable as a routine procedure. It could be carried out simultaneously with the prophylactic instillation of silver nitrate solution into the eyes soon after delivery. *Amer. J. Dis. Child. vol. 64, p. 462.*

SLEEPING SICKNESS REMEDY

Successful use of a new chemical remedy for African sleeping sickness is reported by Dr. T. L. Lawson, of the Medical Services of Uganda. (*Lancet, Oct. 24*).

The chemical is 4.4 diaminodiphenoxypentone, with the trade name of pentamidine. Out of 53 patients whom Dr. Lawson was able to re-examine three months after treatment, 41 were clinically cured, three were much improved, and four improved, and four unaltered or worse.

Advantages of pentamidine, Dr. Lawson points out, are that it swiftly destroys the germs in the peripheral blood and in the gland juice; treatment is complete in 10 days instead of 10 weeks as with other drugs; and toxicity is extremely low. The effective dose for treatment is not more than half the poisoning dose and probably almost one-fifth the killing dose. The speedy results obtained are important both to the patient and from the preventive medical aspect. *Science News Letter, Dec. 5, 1942.*

SCABIES TREATMENT

Since 1940 G. H. Percival, physician to the Skin Department, Edinburgh Royal Infirmary, has been using tetraethylthiuram monosulphide in the treatment of scabies. He reports (*Brit. Med. J., 1942, ii, 451*) that when employing a 1 in 5 dilution with water of the following preparation—tetraethylthiuram monosulphide 25, polyglycerol ricinoleate 10, industrial methylated spirit 65—it gave a very high proportion of cures of both in-patients and out-patients. The preparation is diluted immediately before use, the diluted fluid being rubbed over the whole body, except the head, face and neck, twice daily for three days. It is non-irritating to the skin, no instance of idiosyncrasy has been encountered, it is cheap, clean, and its use does not necessitate the employment of fats or oils.

In a test on 1000 cases of scabies of the efficacy of aqueous and spirituous emulsions of benzyl benzoate, K. C. Mallen (*ibid, p. 452*), found that the aqueous preparation was as effective as the alcoholic preparation. The emulsions used contained equal parts of benzyl benzoate, soap and spirit of water.

VITAMIN C AND HAY FEVER

Daily doses of vitamin C brought great relief to almost all of a group of 25 hay fever sufferers during the last ragweed season, Dr. Harry N. Holmes and Wyvona Alexander of Oberlin College report (*Science, Nov. 27*).

"Apparently there was distinct gain with 88% of the patients," they state.

The vitamin C treatment was tried after it had been observed for several years that the vitamin C level in the body was lowered during hay fever attacks. Other workers had meanwhile developed the theory that histamine, a chemical normally found in the blood, is thrown into the blood stream in excessive amounts during allergic attacks and accounts for some of the unpleasant symptoms. Dr. Holmes found that histamine reacts with vitamin C under certain conditions, suggesting that this excess histamine may be reducing the vitamin C level in patients with hay fever.

NAIL POLISH DERMATITIS

A case is reported by H. C. Semon (*Brit. Med. J., 1942, 1, 146*) of acute relapsing dermatitis due to nail varnish. A cross examination of the patient by the physician showed that she had a tendency to rest the right cheek and chin against her semi-clenched fist, so that the finger-nails were in direct contact with the parts primarily affected. It was also noticed that she suffered from inflammatory patches behind the knees, where the skin came in contact with dried nail varnish used to check the "laddering" of artificial silk stockings. It transpired that every relapse of the dermatitis had occurred at the week-end, a few hours after applying a fresh coat of the nail varnish. As the dermatitis of the legs was caused by a colorless nail varnish. Semon concluded that the offending constituent was either the cellulose nitrate, the solvent or the plasticizer. When the patient stopped using the nail lacquer the dermatitis quickly cleared.

VITAMIN P

In work by Bacharach and Coates (*Analyst, 1942, 67, 313*) on the biological estimation of vitamin P activity, a number of sources of the vitamin are mentioned. A standard citrus concentrate containing 1000 units per gram (u/g) was chosen for reference, and determinations of various fruit products gave the following provisional figures: Rose hips, *R. arvensis*, 6.8 u/g; *R. coriifolia*, 5.6 u/g. excluding any present in pips, skin, hairs, etc. National rose-hip syrup, 3.0 p/mil. Pasteurized blackcurrant juice, 1.6 u/g. Blackcurrant puree, 2.5 u/mil. A specially prepared water soluble blackcurrant concentrate showed 10,600 u/g, or 100 times the activity of recrystallized hesperidin (95 u/g) and the most active vitamin P preparation yet described.

The presence of vitamin P in blackcurrants has not previously been reported; this fruit must now be added to the citrus fruits (in particular their peel), the Hungarian paprika and rose-hips as a source of the vitamin. It is hoped to make preliminary examinations of other fruit and vegetables. Of particular interest is the question whether, as has been suggested, the flavanones of the vitamin P group form an integral part of an osidase system involving ascorbic acid—in which event it follows that the two vitamins should accompany each other in all natural sources—or whether the presence of the flavanones is always associated with the highly-colored chemically related anthrocyanin pigment. In that event relatively good, but colorless, sources of ascorbic acid, such as the potato and the turnip, may be found devoid of vitamin P.

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Cod-liver oil ointment generally contains, in addition to cod-liver oil, zinc oxide, adeps lanae, and soft paraffin; other additions are caustic potash, calcium carbonate, kaolin, and balsam of Peru. In such preparations the vitamin A was found to be rapidly destroyed. The addition of red palm oil (10 per cent.) did not stabilize the preparation, but suitable antioxidants were found to be hydroquinone (0.2 per cent.) or triethanolamine (0.02 per cent.) A suitable formula is as follows: kaolin, 100 gm.; zinc oxide, 100 gm.; cod-liver oil, 100 gm.; soft paraffin (yellow), 700 gm.; triethanolamine, 2.5 gm. This showed a loss in activity of not more than 25 per cent. after three months. *L. Pons, Pharm. Tijdschr. Ned.-Ind. vol. 18, p. 391.*

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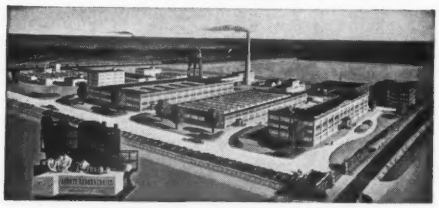

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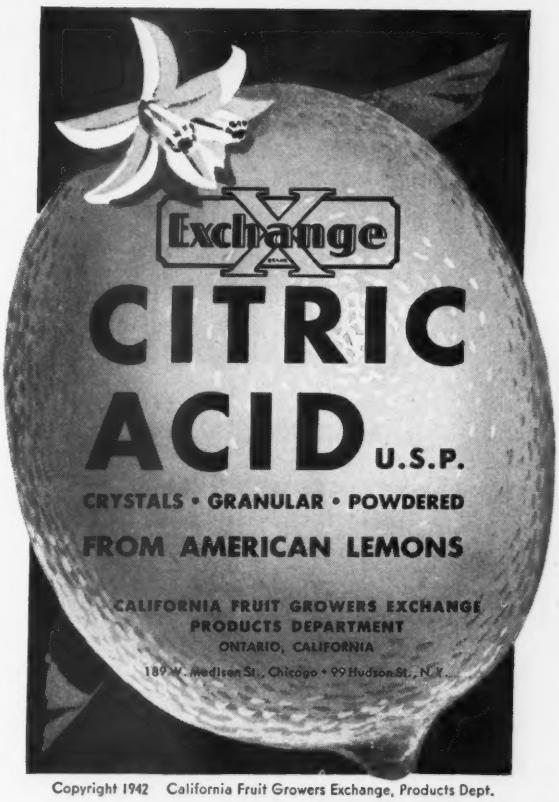

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READERS' QUESTIONS

SUN TAN LOTION: We should like to add a sun tan product to our line, preferably a liquid cream. Any formulas you might suggest would be welcomed. Miami.

We have had considerable success with a lotion formulated along the following lines:

Stearic acid	3.0
Cetyl alcohol	0.5
Sun screen	5.0
Potassium hydroxide	0.1
Borax	0.2
Quince seed	1.0
Water	90.2

This is manufactured in the usual way. Soak the quince seed (with 0.1 parts of methyl para-hydroxybenzoate as preservative) in half of the water overnight and then strain through cheesecloth to obtain a clear mucilage. Melt the stearic acid, cetyl alcohol, and sun screen together and emulsify by means of the solution of potassium hydroxide and borax in the rest of the water. Add the quince seed mucilage and stir gently until a homogeneous liquid cream results. Various organic salicylates, anthranilates and trade named products are effective sun screens.

CLARIFYING TOILET WATER: We have been experimenting with toilet water lately and have had trouble filtering to an absolutely clear solution. We would appreciate your suggestions as to a filtering process which would help us overcome this problem. At this time we also wish to thank you for your helpful advice given in a previous letter. Brooklyn.

A toilet water should be thoroughly chilled and kept at a low temperature for at least twenty-four hours before filtration and then filtered while still cold. Many manufacturers let their lotions stand for a while with talc before filtration, since the talc acts as a clarifying filter medium. Some of the silicious earth filter aids are used for the same purpose. It may even be necessary to use more alcohol or some other solvent in your mixture or a more soluble perfume oil, if careful filtration does not give satisfactory results.

PRESERVATION: I have been using methyl para-hydroxybenzoate as a preservative in my creams and lotions, and although I have not as yet had any trouble, I wish to anticipate possible trouble with rancidity or other breakdown. Is there any other preservative that is more effective and what antioxidant should I use? I have tried hydroquinone, but it gives too much discoloration in the presence of borax. I am sending you data as to the general composition of my preparations. Philadelphia.

If the para-hydroxybenzoate ester you are now using seems satisfactory, there is no reason for changing your preservative. Other esters may be more satisfactory in some instances. Lecithin itself has antioxidant value and should be adequate in combination with the preservative in your lubricating cream. Only the preservative is required in the cleansing cream, while the preservative is sufficient to protect the gums in your powder bases, the only ingredients subject to breakdown. Witch hazel solutions require no preservation and there is nothing in your clay pack that could possibly go bad.

FOAM BATH: Can you give us some leads as to how we can make the foam produced by our foam bath powder more stable? Although the foam as first formed is quite heavy and reasonably lasting, the use of soap in the tub very quickly causes the foam to disperse and break up. Los Angeles.

You have done well in discovering the proper wetting agent to give you heavy, stable foam. Unfortunately, soap and foaming agents always seem to work against each other, so that the addition of soap destroys the foam. Apparently conflict arises between the two different types of surface active agents, resulting in lessening of the foam producing powers. Possibly the use of a different wetting agent or combination of products would be better for your purpose, but present limitations will probably make it very difficult for you to make adequate substitution.

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EGG YOLK
BLOOD ALBUMEN
JAPAN WAX
CANDELILLA WAX
★
CASEIN

CREAM SEPARATION: We have been having some trouble lately with a cream containing the following ingredients: beeswax, lanolin, petrolatum, almond oil, water. This cream was made in small quantities by hand according to the usual procedure. The lanolin, petrolatum and wax were melted in the oil, and after cooling to about 45C. the water (at same temperature) was added and the mass stirred until cooled to about 37C. when it was filled into the jars. After cooling completely, the cream shed a fairly large amount of water when subjected to pressure with a spatula. We have an idea that the mass after the water was added cooled too quickly due to the rather low temperature of the air, and that therefore the water was not fully dispersed. Your opinion about this would be much appreciated. Long Island City.

Apparently you do not have the proper balance between emulsifying agent and the amount of water present. Reduce the amount of petrolatum and almond oil and increase the proportion of lanolin. The addition of a small amount of absorption base should also be helpful and the water might also be reduced in quantity. It is most important in creams of this type that stirring be very thorough and of long enough duration to make a smooth, homogeneous cream.

HAIR GROWTH: In recent years has any preparation or compound been made available that will really cause hair to grow or stop the loss of hair. With so many conflicting claims I find it difficult to come to any conclusion myself. Minneapolis.

All present evidence tends to the belief that no attempts at "feeding" the scalp or hair have any effect on hair growth, with the doubtful exception of some of the newer vitamins still in the laboratory stage of development. Some years ago experiments that were made seemed to indicate that cholesterol had a definite effect in increasing hair growth. Repetition of the experiments, using adequate controls, showed that any improvement in the condition of the hair was due solely to massage. Scalp stimulation, either by physical massage or chemical irritation or stimulation, as with pilocarpine, may temporarily increase the flow of blood to the scalp and improve hair growth, but this effect is transient.

COLORING LIQUID POWDER: We market a liquid powder made from milk, zinc oxide, and glycerol, and we would like to dispense this product in the various face powder shades, especially in the deep suntan shades. We have tried various pigments and coloring matter unsuccessfully. The compound bleaches the colors so completely that we either get no color or we have to use several times the exact amount that would be required by using the correct coloring substances, to get any color at all. Chicago.

It is entirely different coloring a powder from coloring a liquid, since soluble dyes can be used in very small concentration in the latter case. Select non-bleeding pigments to mix with the zinc oxide until the proper shade is obtained; then mix these with the milk and the glycerin. If the resulting suspension does not have the color you wish, a small amount of water-soluble dye may be added to the liquid. This will have no effect on the color of the powder deposited on the skin, but will give a better-looking product.

CLEANSING CREAM: I wish to manufacture a cleansing cream that can be put up in solid form with a paper cover. Can you advise me as to what material to use for the purpose? Trenton.

Considering the type of package you have in mind, the cold cream type of cleansing cream would be inadvisable since it would tend to lose water and dry out. A liquefying cleansing cream type would probably be more suitable. This can be made by melting together 60 parts of mineral oil, 20 parts of petrolatum, 10 parts of ceresin, and 10 parts of paraffin.

LIQUID SHAMPOO: Can you supply me with information regarding the formulation of liquid shampoos based on synthetic detergents? Is it possible to use one compound to produce the desired foaming, detergency, and emulsifying action, or must several components be combined? Seattle.

For the most part, shampoos of the type you are interested in consist of solutions of one or at most two active substances, since many wetting agents combine a variety of desirable properties. The wetting agent, in proper proportion, which differs according to the compound used, is dissolved in water, usually with the addition of glycerin, alcohol, or a glycol derivative as an additional solvent to keep the solution clear. A thickening agent, such as glycerin or a gum is usually considered to be a desirable addition. A small amount of oil is often added to counteract the too drastic action of the detergent.

BRILLIANTINE: Can you please supply me with formulas for a liquid and jelly brilliantine? New York.

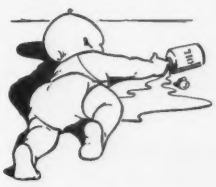
Liquid brilliantines consist of mineral oil of the proper viscosity colored with an oil soluble dye and suitably perfumed. If desired, a little vegetable oil may be mixed with the mineral oil, but serves no useful purpose. A suitable jelly brilliantine can be made along the following lines:

Spermaceti	10
Beeswax	5
Mineral oil	85

Melt these ingredients together, stir, and pour into jars. Suitable oil soluble colors and perfume may be added as desired.

LIQUID DENTIFRICE: We are readers of your magazine and will appreciate your sending us a good formula for making liquid dentifrice. Memphis.

Liquid dentifrices of the type you are interested in generally consist of from one to five per cent. of a synthetic detergent, about ten per cent. of alcohol, ten per cent. of glycerin, one per cent. of gum such as methyl cellulose, and the rest water and flavor. The detergent must be chosen so that it is nontoxic.



BABY OILS: Can you please send me information concerning the composition of baby oils and, if possible, a formula for one? Albany.

A completely satisfactory baby oil consists wholly of a highly purified mineral oil. This oil is non-irritating and very good cleansing value. Up to about ten per cent. of a vegetable oil such as sesame or peanut oil may be added to give some emollient value.

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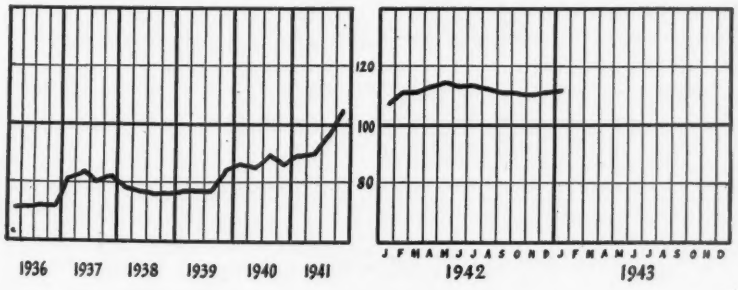
Balsam Peru 5c
Bay oil 15c
Bois de Rose Braz. 50c
Citronella oil Ceylon 5c
Colocynth pulp 10c
Elder flowers 10c
Eucalyptus oil 5c
Geranium oil Bourbon 50c
Golden seal root 15c
Ipecac root 15c
Menthol natural 50c
Rue oil $1.25

Down

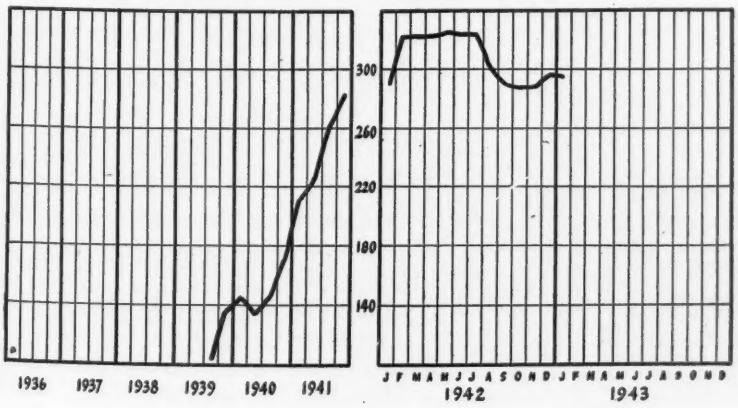
Angostura bark 1c
Arnica flowers 5c
Belladonna leaves 5c
Bergamot oil $10
Birch oil Southern $1.25
Sweet Northern 25c
Buchu leaves 5c
Cardamom oil $6
Cedar leaf oil 5c
Celery oil $1
Chamomile flowers Hungar. 3c
Cumin seed Morocco 3c
Ergot 5c
Eugenol 60c
Fennel oil 95c
Gentian root 4c
Geranium oil African $1.50
Grapefruit oil 5c
Henna leaves 6c
Horehound herb 1c
Lavender spike oil 50c
Lemongrass oil 15c
Lime oil, dist. $1.25
expressed $1.25
Linaloe oil Mex. 25c
Mandarin oil $2.25
Olibanum gum, siftings ½c
tears 2c
Papain pure powd. 5c
Senega root 3c
Spearmint oil 20c
Stramonium leaves 1c
Wormwood oil 15c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced slightly from 111.7 to 112 during the month. Balsam Peru advanced another five cents a pound to $1.40 while menthol also was up fifty cents a pound to $13.50.

15 Botanicals—Weighted Price Index. 1926=100.



The botanical drug index declined slightly this month from 296.3 to 295. Lower prices prevailed on arnica which dropped from $2.70 to $2.65; belladonna from $1.80 to $1.75; buchu from 85 to 80 cents; ergot from $1.40 to $1.35; and gentian from 55 to 51 cents. Two advances were scored with ipecac going to $1.75 from $1.60, while licorice went from 54 to 64 cents.

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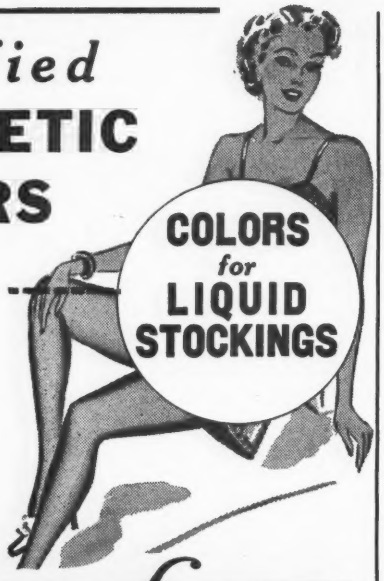

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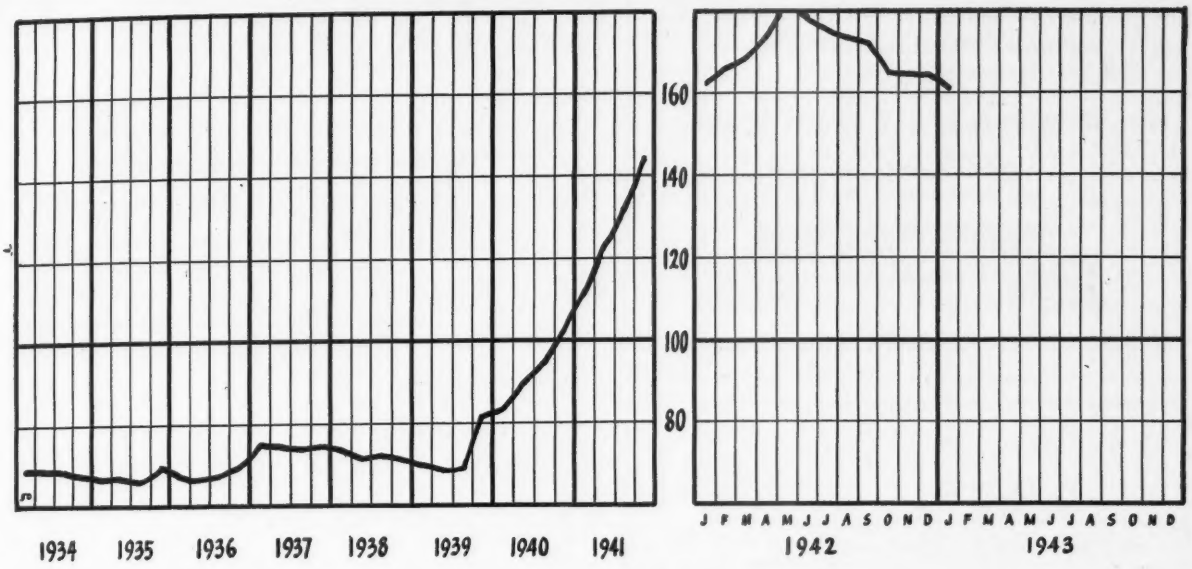
50 Raw Materials—Weighted Price Index. 1926=100.



The price index for fifty commodities during December continued its decline dropping to 160.7 from the previous month's 164.4. The decline in prices was largely due to the condition in the essential oil market where advance buying has practically stopped as users have begun to dig into their accumulated inventories. The botanicals also declined slightly and menthol made another advance in a market which continued otherwise without any noteworthy action.

• Prices quoted in this section were current on the first of this month.

MARKET REPORT ON CRUDE DRUGS

Despite the many developments that have recently taken place which may cut the supply of a number of crude drug items, dealers in the local market do not look for any unusual activity during the first quarter of 1943.

Import regulations, low price ceilings under the General Maximum Price Regulation Order, and unsettled shipping conditions all tend to threaten the future supply of those drugs that have up until now been obtainable for shipment.

On the demand side, however, the outlook does not appear to be particularly promising. With the increasing number of physicians having been called into the armed forces, cessation of operations in the liquor trade, and rationing of alcohol and sugar all tend to make the outlook extremely clouded for the coming year. Industrial uses have in certain instances been seriously curtailed, it is pointed out.

ESSENTIAL OILS

The year just passed might be characterized by the desire on the part of most all buyers for consuming industries to accumulate inventories on practically all aromatic raw materials. This situation was induced by fear that formulas could not be maintained in a way acceptable to consumers with the result that there was a clamor for goods and more goods.

Today the situation has changed. Not only has the buyer stopped his policy of accumulation, but he has in fa ct started to use up some of his accumulated stocks. Dealers and speculators after comparing inventory values today with those of several months back are liquidating some of their surplus stocks.

By surplus we mean that a dealer may have quantities of one or several items and that a similar situation prevails in other quarters involving still other essential oils. The liquidation of these commodities on a market where there is little or no demand is likely to result in lower prices at least during the early part of this year. To look further into the future is impracticable because of the many imponderables in a complex situation.

OLIVE OIL

Prices for edible olive oil remain far above normal, but are below the peak levels reached earlier in the war-period when the cutting off of importations created an active demand for spot supplies that carried prices sharply upward, not only on imported oil but for the domestic product as well with the result that production in this country was expanded and the quality of the oil improved to an extent that apparently makes it compare favorably with the highest grade oils formerly imported.

According to some reports, consumption of domestic edible olive oil in recent weeks has shown an increase owing to the growing scarcity and high cost of imported oil. With military operations spreading in the Mediterranean area, which produces practically all of the foreign oil consumed in this country, importations in 1943 may fall below the light arrivals during the year now drawing to a close, especially as there appears to be a scarcity abroad of suitable containers for shipment of the oil.

In an official government report the apparent disappearance of edible olive oil in this country during the first half of 1942 was put at 10,000,000 pounds.

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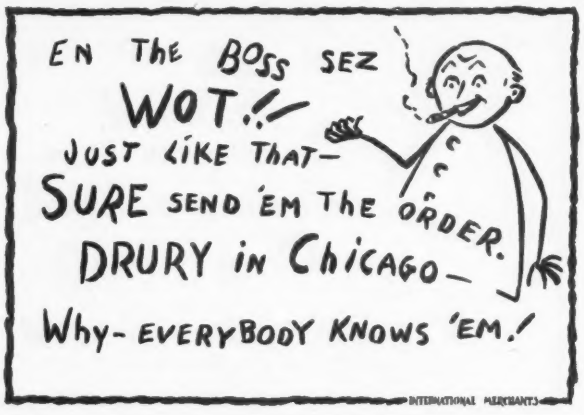

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There is an impression in some quarters that consumption during the second half of the current year will show an increase over these figures. In all of 1941 the apparent disappearance of edible olive oil was 22,000,000 pounds, while in 1940 it was 53,000,000 pounds.

GLYCERINE

Refined glycerine sold by manufacturers and converters in small quantities, such as packages for pharmaceutical purposes, are brought under dollars and cents ceiling prices today by the Office of Price Administration in an action which also provides a specific allowance for refiners incurring increased costs because of the substitution of glass containers for tin.

The action will not affect present retail prices.

At the same time, OPA permitted sellers of refined glycerine to quote f.o.b. refinery prices upon request of a government agency.

This step was contained in Amendment No. 4 to Revised Price Schedule No. 38 which on November 10, 1941, established ceiling prices for crude and refined glycerine when sold in quantities of more than 500 pounds. The amendment, effective January 8, 1942, makes no change in these prices but includes several other changes so that provisions of the sections dealing with imports, taxes, and licensing of distributors are revised to conform with similar sections in other price measures.

Among major procedural revisions was the elimination of the requirement for filing reports to OPA. These quarterly inventory reports are no longer needed since the same information can be obtained by OPA from inventory reports submitted to the War Production Board, which has kept close check on the supplies of glycerine, an industrial chemical vital to the production of high explosives and other war and civilian articles. However, sellers of glycerine are still required to keep for inspection purposes all records of sales and transactions.

Added to the tables of specific prices, for the zones set forth in the schedule, is the following table of maximum delivered prices for refined glycerine sold by refiners, or converters, in tin containers:

Tin Containers of 1 to 49 Pounds

	Cents per pound	
	Zones A and C	*Zone B*
Chemically pure glycerine (98% glycerol)	$0.22¼	$0.24¼
Chemically pure glycerine (U. S. P. 95% glycerol)	0.21¾	0.23¾

Tin Containers of 50 Pounds or More

	Cents per pound	
	Zones A and C	*Zone B*
Chemically pure glycerine (98% glycerol):		
1 tin	$0.21¾	$0.23¾
2 to 9 tins	0.21¼	0.23¼
10 tins or more	0.20¾	0.22¾
Chemically pure glycerine (U. S. P. 95% glycerol):		
1 tin	0.21¼	0.23¼
2 to 9 tins	0.20¾	0.22¾
10 tins or more	0.20¼	0.22¼
Dynamite or high gravity glycerine:		
1 tin	0.21¼	0.23¼
2 to 9 tins	0.20¾	0.22¾
10 tins or more	0.20¼	0.22¼

An allowance of ¾c per pound to the maximum delivered prices for glycerine in tin containers was provided in establishing the price for refined glycerine sold in glass bottles, as illustrated in the following table, which is also set forth in the amendment:

Maximum prices for refined glycerine sold in glass containers

The maximum prices for refined glycerine sold by a refiner or a converter in glass bottles shall be:

	Cents per pound	
	Zones A and C	*Zone B*
Chemically pure glycerine (98% glycerol)	$0.23	$0.25
Chemically pure glycerine (U. S. P. 95% glycerol)	0.22½	0.24½
Dynamite or high gravity glycerine	0.22½	0.24½

If the quantity sold is equal to two cases or more, the prices listed above shall be delivered prices. If the quantities sold amount to less than two cases, such prices shall be f.o.b. refinery.

The amendment incorporated changes which bring imported glycerine under the provisions of the General Import Regulation (Supplementary Regulation No. 12 to the general Maximum Price Regulation) and places export sales of the commodity under the provisions of the Maximum Export Price Regulation. At the same time licensing of distributors of glycerine is accomplished by applying the provisions of Supplementary Order No. 11, which already apply to distributors of drugs and chemicals.

ANISE

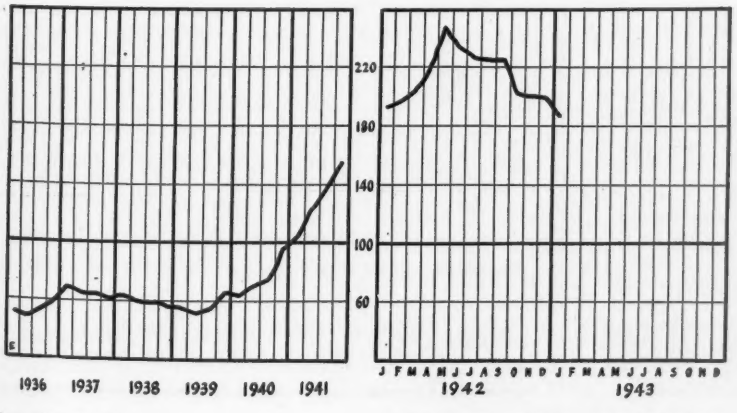
The newspaper El Quindio, of Pereira, Colombia, points out that Colombia imported 108 tons of anise in 5 years for use in the aguardiente (liquor) industry. This is a popular beverage of that country, made from rum or other forms of alcohol flavored with anise.

The newspaper stresses the fact that the importation of anise has now fallen off considerably and that the national production of this plant is increasing rapidly.

In 1940 Colombia produced 5,245,580 liters of aguardiente valued at 8,741,961 pesos (Colombian) and in 1941 5,718,308 liters, worth 8,860,398 pesos. In 5 years there was a total production of 24,632,-742 liters of this liquor which requires an average of a pound and a half of anise for each 18 liters of aguardiente.

The total national consupmtion of anise over a 5 year period was 1,333,607 kilograms.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oil index registered a further decline this month from 199 to 186.8. The decline was lead by bergamot which dropped from $32 to $22 while geranium went from $17.50 to $16 and lime oil from $12.50 to $11.25. Citronella and eucalyptus each advanced five cents, the former from $1.10 to $1.15 and the latter from 95 cents to $1.00.

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BELLADONNA

Growing conditions were so favorable, and the quality of the crop so good, that officials of the Department of Agriculture forsees little likelihood of any shortage developing in supplies of belladonna to meet civilian and military needs this year unless some condition arises—not now expected—that will greatly expand demands for this drug.

The way officials view the situation at this time, the United States is now "entirely in the clear" on the belladonna situation and there will be sufficient supplies on hand to meet expected needs even if another not pound of the drug was produced this year.

Between 500 and 700 acres were planted to belladonna by some 200 to 250 farmers under a government-sponsored program to encourage domestic production of the valuable drug to relieve the pinch resulting from curtailment of imports because of the war. Much of the credit for success of the project goes to the Bureau of Plant Industry whose work in prior years developed a strong strain of belladonna seed which was made available to growers for planting in 1942.

The average alkaloid content of the crop, according to officials, measured up to a very high level—approximately twice the U.S.P. standard for belladonna and considerably better than the average alkaloid content of imports of prior years. Since premiums are not paid on alkaloid content exceeding U.S.P. standards the high alkaloid content leaves and stems can be used to bring the lower quality product up to standard and thus expand the overall supply picture.

Between 60 and 70 per cent of the crop was grown by farmers under contract with dealers and users of belladonna, many of these contracts being entered into even before planting. In the remaining group there were many farmers who produced the drug under agreements with those who might be termed "promoters" who guaranteed to find a market for all the belladonna the farmers could produce. Not more than 10 or 12 per cent of the farmers were without some kind of contract or agreement.

Officials said that it was possible that the farmers in the latter group may find some difficulty in disposing of their belladonna since dealers and users are pretty well stocked up. However, all the farmers growing the drug were supplied with the names of all dealers and users of belladonna by the department beforehand, and it is believed they will be able to find a buyer in this group eventually.

It is quite possible, though, it was added, that the price received by those who grew the crop on speculation might not be as high as the price received by farmers under contract. Also, it was said, the "promoters" who entered into agreements with the farmers may not be able to make good on all their claims of getting the farmers an exceptionally high price for their output. Some of these "promoters" were said to have promised prices of as high as $5 a pound. The average price paid to the farmers under contract with dealers and users was around $1.50 a pound.

Because the supply picture has shown such a marked improvement over what it was a year ago, and dealers are stocked up sufficiently to last through this year, it was considered doubtful whether the farmers would receive as good contracts in 1943 as they received in 1942.

As a consequence, it can be expected that many of the farmers who grew belladonna in 1942 will drop out of the picture this year, although enough of the more efficient growers will be on hand to continue the growing of a sizable crop.

SHARK LIVER OIL

A new Mexican company, Compania Vitaminica y de Extracciones has recently been organized for the elaboration and reduction of shark livers to oils and vitamins. Formerly all the livers were shipped in cans to the various buyers in California, but with the increasing scarcity of tin cans, livers can no longer be shipped for reduction in United States laboratories, even if the buyers could pay the new high export tax now being levied by the Mexican Government.

Operation of the new plant was expected to commence late in 1942, as soon as the necessary machinery and equipment could be obtained from the United States. Its location will be at Guaymas; its function will be to reduce and extract from the shark livers the oil content and vitamins and to freeze and ship to the United States markets.

SULFAPYRIDINE

Increased production again made possible a further reduction in sulfapyridine and sulfapyridine sodium. The new schedule follows: 100 lbs. in 25 lb. cans or 100 lb. drums, $5 per lb.; 500 lbs. in 25 lb. cans or 100 lb. drums, $5.10 per lb.; 100 lb. drum $5.15 per lb.; 25 lb. can $5.30 per lb.

NICOTINAMIDE

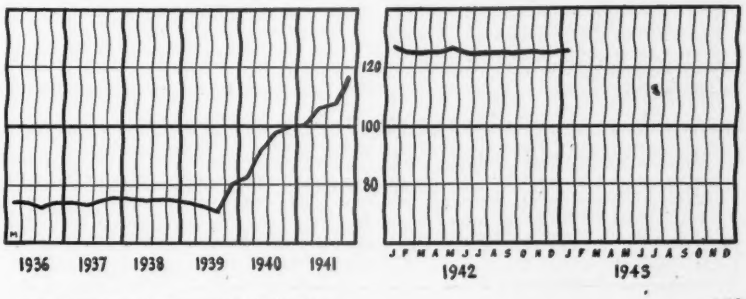
Schedules have been reduced to the following basis: 100 lb. drum $7 per lb.; 5 lb. lots $7.10 per lb.; 1 lb. lots $7.14 per lb.

TOTAQUINE

A reduction in the price of totaquine USP XII was announced and the following schedule issued: 2000 oz. can 35c per oz.; 1000 oz. can 35c per oz.; 25 oz. can 38c per oz.

The medicinal chemicals index showed a slight variation this month as menthol advanced from $13.00 to $13.50 thus leading the index to advance from 124.4 to 125.1. Demand for all of these items naturally continued strong as demands increased from the armed forces and from lend-lease and the civilian population entered the season for colds, grippe and influenza.

15 Medicinal Chemicals—Weighted Price Index 1926=100.



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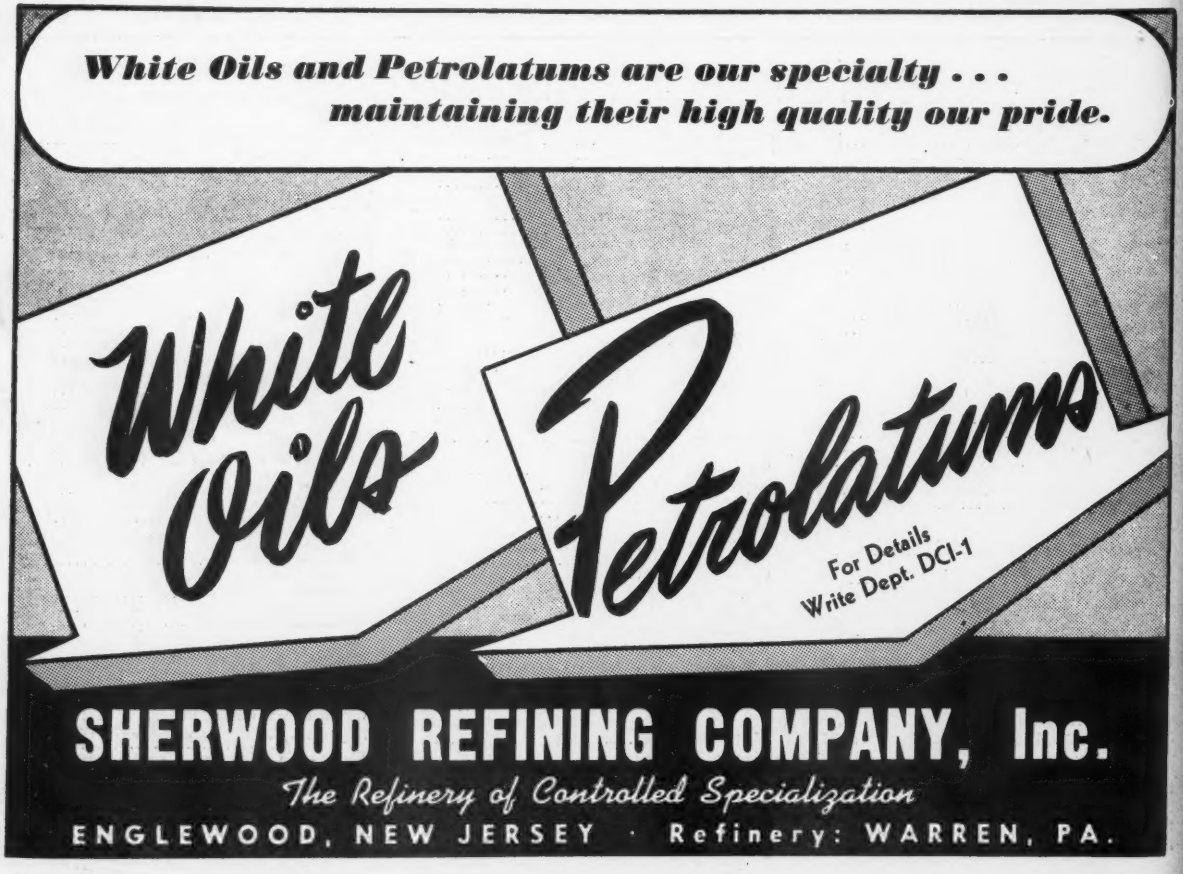

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